WROUGHT STEEL BUTT-WELDING FITTINGS

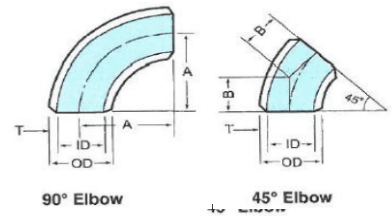
DOBEND

90° Elbow (Long, Short)
45° Elbow (Long)

Sch 5S, Sch 10S, STD, Sch40, XS, Sch 80, Sch 160, XXS

Material:

ASTM A234 WPB; A403 WP304/304L; A403 WP316/316L; A403 WP310S



ASME B16.9

Unit : Inch

Nominal Pipe Size	Outside Diameter OD	Center to End					STD		Sch 40		XS		Sch 80		Sch 160		XXS		Nominal Pipe Size
		Long		Short	3D (mm)		T	ID	T	ID	T	ID	T	ID	T	ID	T	ID	
		A	B	A	A	B													
1/2	0.840	1.50	0.62	-	-	-	0.109	0.622	0.109	0.622	0.147	0.546	0.147	0.546	0.188	0.464	0.294	0.252	1/2
3/4	1.050	1.50	0.75	-	57	24	0.113	0.824	0.113	0.824	0.154	0.742	0.154	0.742	0.218	0.614	0.308	0.434	3/4
1	1.315	1.50	0.88	1.00	76	31	0.133	1.049	0.133	1.049	0.179	0.957	0.179	0.957	0.250	0.815	0.358	0.599	1
1.1/4	1.660	1.88	1.00	1.25	95	39	0.140	1.380	0.140	1.380	0.191	1.278	0.191	1.278	0.250	1.160	0.382	0.896	1.1/4
1.1/2	1.900	2.25	1.12	1.50	114	47	0.145	1.610	0.145	1.610	0.200	1.500	0.200	1.500	0.218	1.464	0.400	1.100	1.1/2
2	2.375	3.00	1.38	2.00	152	63	0.154	2.067	0.154	2.067	0.218	1.939	0.218	1.939	0.344	1.687	0.436	1.503	2
2.1/2	2.875	3.75	1.75	2.50	190	79	0.203	2.469	0.203	2.469	0.276	2.323	0.276	2.323	0.375	2.125	0.552	1.771	2.1/2
3	3.500	4.50	2.00	3.00	229	95	0.216	3.068	0.216	3.068	0.300	2.900	0.300	2.900	0.438	2.624	0.600	2.300	3
3.1/2	4.000	5.25	2.25	3.50	267	111	0.226	3.548	0.226	3.548	0.318	3.364	0.318	3.364	-	-	-	-	3.1/2
4	4.500	6.00	2.50	4.00	305	127	0.237	4.026	0.237	4.026	0.337	3.826	0.337	3.826	0.531	3.438	0.674	3.152	4
5	5.563	7.50	3.12	5.00	381	157	0.258	5.047	0.258	5.047	0.375	4.813	0.375	4.813	0.625	4.313	0.750	4.063	5
6	6.625	9.00	3.75	6.00	457	189	0.280	6.065	0.280	6.065	0.432	5.761	0.432	5.761	0.719	5.187	0.864	4.897	6
8	8.625	12.00	5.00	8.00	610	252	0.322	7.981	0.322	7.981	0.500	7.625	0.500	7.625	0.906	6.813	0.875	6.875	8
10	10.750	15.00	6.25	10.00	762	316	0.365	10.020	0.365	10.020	0.500	9.750	0.594	9.562	1.125	8.500	1.000	8.750	10
12	12.750	18.00	7.50	12.00	914	378	0.375	12.000	0.406	11.938	0.500	11.750	0.688	11.374	1.374	10.002	1.000	10.750	12
14	14.000	21.00	8.75	14.00	1037	441	0.375	13.250	0.438	13.124	0.500	13.000	0.750	12.500	1.406	11.188	-	-	14
16	16.000	24.00	10.00	16.00	1219	505	0.375	15.250	0.500	15.000	0.500	15.000	0.844	14.312	1.594	12.812	-	-	16
18	18.000	27.00	11.25	18.00	1372	568	0.375	17.250	0.562	16.876	0.500	17.000	0.938	16.124	1.781	14.438	-	-	18
20	20.000	30.00	12.50	20.00	1524	632	0.375	19.250	0.594	18.812	0.500	19.000	1.031	17.938	1.968	16.064	-	-	20
22	22.000	33.00	13.50	22.00	1676	694	0.375	21.250	0.594	20.812	0.500	21.000	1.125	19.750	2.125	17.750	-	-	22
24	24.000	36.00	15.00	24.00	1829	757	0.375	23.250	0.688	22.624	0.500	23.000	1.219	21.562	2.344	19.312	-	-	24
26	26.000	39.00	16.00	26.00	1981	821	0.375	25.250	0.688	24.624	0.500	25.000	-	-	-	-	-	-	26
28	28.000	42.00	17.25	28.00	2134	883	0.375	27.250	0.688	26.624	0.500	27.000	-	-	-	-	-	-	28
30	30.000	45.00	18.50	30.00	2286	964	0.375	29.250	0.688	28.624	0.500	29.000	-	-	-	-	-	-	30
32	32.000	48.00	19.75	32.00	2438	1010	0.375	31.250	0.688	30.624	0.500	31.000	-	-	-	-	-	-	32
34	34.000	51.00	21.00	34.00	2591	1073	0.375	33.250	0.688	32.624	0.500	33.000	-	-	-	-	-	-	34
36	36.000	54.00	22.25	36.00	2743	1135	0.375	35.250	0.750	34.500	0.500	35.000	-	-	-	-	-	-	36
38	38.000	57.00	23.62	38.00	2896	1200	0.375	37.250	-	-	0.500	37.000	-	-	-	-	-	-	38
40	40.000	60.00	24.88	40.00	3048	1264	0.375	39.250	-	-	0.500	39.000	-	-	-	-	-	-	40
42	42.000	63.00	26.00	42.00	3200	1326	0.375	41.250	-	-	0.500	41.000	-	-	-	-	-	-	42
44	44.000	66.00	27.38	44.00	3353	1389	0.375	43.250	-	-	0.500	43.000	-	-	-	-	-	-	44
46	46.000	69.00	28.62	46.00	3505	1453	0.375	45.250	-	-	0.500	45.000	-	-	-	-	-	-	46
48	48.000	72.00	29.88	48.00	3658	1516	0.375	47.250	-	-	0.500	47.000	-	-	-	-	-	-	48
50	50.000	75.00	31.06	50.00	-	-	0.375	49.250	-	-	0.500	49.000	-	-	-	-	-	-	50
52	52.000	78.00	32.30	52.00	-	-	0.375	51.250	-	-	0.500	51.000	-	-	-	-	-	-	52
54	54.000	81.00	33.55	54.00	-	-	0.375	53.250	-	-	0.500	53.000	-	-	-	-	-	-	54
56	56.000	84.00	34.79	56.00	-	-	0.375	55.250	-	-	0.500	55.000	-	-	-	-	-	-	56
58	58.000	87.00	36.04	58.00	-	-	0.375	57.250	-	-	0.500	57.000	-	-	-	-	-	-	58
60	60.000	90.00	37.28	60.00	-	-	0.375	59.250	-	-	0.500	59.000	-	-	-	-	-	-	60

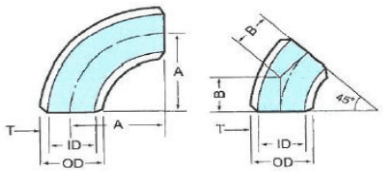
WROUGHT STEEL BUTT-WELDING FITTINGS

DOBEND

90° Elbow (Long, Short)
45° Elbow (Long)

Sch 5S, Sch 10S, STD, Sch40, XS, Sch 80, Sch 160, XXS

Material:
ASTM A234 WPB; A403 WP304/304L; A403 WP316/316L; A403 WP310S



ASME B16.9

Unit : Inch

Nominal Pipe Size	Outside Diameter OD	Center to End					Sch 20		Sch 30		Sch 60		Sch 100		Sch 120		Sch 140		Nominal Pipe Size
		Long		Short	3D (mm)		T	ID	T	ID	T	ID	T	ID	T	ID	T	ID	
		A	B	A	A	B													
4	1.000	6.00	2.50	4.00	305	127	-	-	-	-	-	-	-	-	0.438	3.624	-	-	4
5	5.563	7.50	3.12	5.00	381	157	-	-	-	-	-	-	-	-	0.500	4.563	-	-	5
6	6.625	9.00	3.75	6.00	457	189	-	-	-	-	-	-	-	-	0.562	5.501	-	-	6
8	8.625	12.00	5.00	8.00	610	252	0.250	8.125	0.277	8.071	0.406	7.813	0.594	7.437	0.719	7.187	0.812	7.001	8
10	10.750	15.00	6.25	10.00	762	316	0.250	10.250	0.307	10.136	0.500	9.750	0.719	9.312	0.844	9.062	1.000	8.750	10
12	12.750	18.00	7.50	12.00	914	378	0.250	12.250	0.330	12.090	0.562	11.626	0.844	11.062	1.000	10.750	1.125	10.500	12
14	14.000	21.00	8.75	14.00	1037	441	0.312	13.376	0.375	13.250	0.594	12.812	0.936	12.128	1.094	11.812	1.250	11.500	14
16	16.000	24.00	10.00	16.00	1219	505	0.312	15.376	0.375	15.250	0.656	14.688	1.031	13.938	1.219	13.562	1.438	13.124	16
18	18.000	27.00	11.25	18.00	1372	568	0.312	17.376	0.438	17.124	0.750	16.500	1.156	15.688	1.375	15.250	1.562	14.876	18
20	20.000	30.00	12.50	20.00	1524	632	0.375	19.250	0.500	19.000	0.812	18.376	1.281	17.438	1.500	17.000	1.750	16.500	20
22	22.000	33.00	13.50	22.00	1676	694	0.375	21.250	0.562	21.000	0.875	20.250	1.375	19.250	1.625	18.750	1.875	18.250	22
24	24.000	36.00	15.00	24.00	1829	757	0.375	23.250	0.562	22.876	0.969	22.062	1.531	20.938	1.812	20.376	2.062	19.876	24
26	26.000	39.00	16.00	26.00	1981	821	0.500	25.000	-	-	-	-	-	-	-	-	-	-	26
28	28.000	42.00	17.25	*28.00	2134	883	0.500	27.000	0.625	26.750	-	-	-	-	-	-	-	-	28
30	30.000	45.00	18.50	*30.00	2286	964	0.500	29.000	0.625	28.750	-	-	-	-	-	-	-	-	30
32	32.000	48.00	19.75	*32.00	2438	1010	0.500	31.000	0.625	30.750	-	-	-	-	-	-	-	-	32
34	34.000	51.00	21.00	*34.00	2591	1073	0.500	33.000	0.625	32.750	-	-	-	-	-	-	-	-	34
36	36.000	54.00	22.25	*36.00	2743	1135	0.500	35.000	0.625	34.750	-	-	-	-	-	-	-	-	36

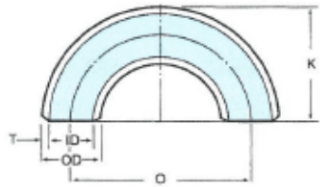
WROUGHT STEEL BUTT-WELDING FITTINGS

DOBEND

180° Elbow (Long, Short)

STD, Sch40, XS, Sch80, Sch160, XXS
Sch20, Sch30, Sch60, Sch100, Sch120, Sch140

Material:
ASTM A234 WPB; A403 WP304/304L; A403 WP316/316L; A403 WP310S



180° Elbow

ASME B16.9

Unit : Inch

Nominal Pipe Size	Outside Diameter OD	Long		Short		STD		Sch 40		XS		Sch 80		Sch 160		XXS		Nominal Pipe Size
		Center to Center O	Back to Face K	Center to Center O	Back to Face K	T	ID	T	ID	T	ID	T	ID	T	ID	T	ID	
1/2	0.840	3.00	1.88	-	-	0.109	0.622	0.109	0.622	0.147	0.546	0.147	0.546	0.188	0.464	0.294	0.252	1/2
3/4	1.050	3.00	2.00	-	-	0.113	0.824	0.113	0.824	0.154	0.742	0.154	0.742	0.219	0.612	0.308	0.434	3/4
1	1.315	3.00	2.19	2.00	1.62	0.133	1.049	0.133	1.049	0.179	0.957	0.179	0.957	0.250	0.815	0.358	0.599	1
1.1/4	1.660	3.75	2.75	2.50	2.06	0.140	1.380	0.140	1.380	0.191	1.278	0.191	1.278	0.250	1.160	0.382	0.896	1.1/4
1.1/2	1.900	4.50	3.25	3.00	2.44	0.145	1.610	0.145	1.610	0.200	1.500	0.200	1.500	0.281	1.338	0.400	1.100	1.1/2
2	2.375	6.00	4.19	4.00	3.19	0.154	2.067	0.154	2.067	0.218	1.939	0.218	1.939	0.344	1.687	0.436	1.503	2
2.1/2	2.875	7.50	5.19	5.00	3.94	0.203	2.469	0.203	2.469	0.276	2.323	0.276	2.323	0.375	2.125	0.552	1.771	2.1/2
3	3.500	9.00	6.25	6.00	4.75	0.216	3.068	0.216	3.068	0.300	2.900	0.300	2.900	0.438	2.624	0.600	2.300	3
3.1/2	4.000	10.50	7.25	7.00	5.50	0.226	3.548	0.226	3.548	0.318	3.364	0.318	3.364	-	-	-	-	3.1/2
4	4.500	12.00	8.25	8.00	6.25	0.237	4.026	0.237	4.026	0.337	3.826	0.337	3.826	0.531	3.438	0.674	3.152	4
5	5.563	15.00	10.31	10.00	7.75	0.258	5.047	0.258	5.047	0.375	4.813	0.375	4.813	0.625	4.313	0.750	4.063	5
6	6.625	18.00	12.31	12.00	9.31	0.280	6.065	0.280	6.065	0.432	5.761	0.432	5.761	0.719	5.187	0.864	4.897	6
8	8.625	24.00	16.31	16.00	12.31	0.322	7.981	0.322	7.981	0.500	7.625	0.500	7.625	0.906	6.813	0.875	6.875	8
10	10.750	30.00	20.38	20.00	15.38	0.365	10.020	0.365	10.020	0.500	9.750	0.594	9.562	1.125	8.500	1.000	8.750	10
12	12.750	36.00	24.38	24.00	18.38	0.375	12.000	0.406	11.938	0.500	11.750	0.688	11.374	1.312	10.126	1.000	10.750	12
14	14.000	42.00	28.00	28.00	21.00	0.375	13.250	0.438	13.124	0.500	13.000	0.750	12.500	1.406	11.188	-	-	14
16	16.000	48.00	32.00	32.00	24.00	0.375	15.250	0.500	15.000	0.500	15.000	0.844	14.312	1.594	12.812	-	-	16
18	18.000	54.00	36.00	36.00	27.00	0.375	17.250	0.562	16.876	0.500	17.000	0.938	16.124	1.781	14.438	-	-	18
20	20.000	60.00	40.00	40.00	30.00	0.375	19.250	0.594	18.812	0.500	19.000	1.031	17.938	1.969	16.062	-	-	20
22	22.000	66.00	44.00	44.00	33.00	0.375	21.250	0.594	20.812	0.500	21.000	1.125	19.750	2.125	17.750	-	-	22
24	24.000	72.00	48.00	48.00	36.00	0.375	23.250	0.688	22.624	0.500	23.000	1.219	21.562	2.344	19.312	-	-	24

Nominal Pipe Size	Outside Diameter OD	Long		Short		Sch 20		Sch 30		XS		Sch 60		Sch 120		Sch 140		Nominal Pipe Size
		Center to Center O	Back to Face K	Center to Center O	Back to Face K	T	ID	T	ID	T	ID	T	ID	T	ID	T	ID	
4	4.500	12.00	8.25	8.00	6.25	-	-	-	-	-	-	-	-	0.438	3.624	-	-	4
5	5.563	15.00	10.31	10.00	7.75	-	-	-	-	-	-	-	-	0.500	4.563	-	-	5
6	6.625	18.00	12.31	12.00	9.31	-	-	-	-	-	-	-	-	0.562	5.501	-	-	6
8	8.625	24.00	16.31	16.00	12.31	0.250	8.125	0.277	8.071	0.406	7.813	0.594	7.437	0.719	7.187	0.812	7.001	8
10	10.750	30.00	20.38	20.00	15.38	0.250	10.250	0.307	10.136	0.500	9.750	0.719	9.312	0.844	9.062	1.000	8.750	10
12	12.750	36.00	24.38	24.00	18.38	0.250	12.250	0.330	12.090	0.562	11.626	0.844	11.062	1.000	10.750	1.125	10.500	12
14	14.000	42.00	28.00	28.00	21.00	0.312	13.376	0.375	13.250	0.594	12.812	0.936	12.128	1.094	11.812	1.250	11.500	14
16	16.000	48.00	32.00	32.00	24.00	0.312	15.376	0.375	15.250	0.656	14.688	1.031	13.938	1.219	13.562	1.438	13.124	16
18	18.000	54.00	36.00	36.00	27.00	0.312	17.376	0.438	17.124	0.750	16.500	1.156	15.688	1.375	15.250	1.562	14.876	18
20	20.000	60.00	40.00	40.00	30.00	0.375	19.250	0.500	19.000	0.812	18.376	1.281	17.438	1.500	17.000	1.750	16.500	20
22	22.000	66.00	44.00	44.00	33.00	0.375	21.250	0.500	21.000	0.875	20.250	1.375	19.250	1.625	18.750	1.875	18.250	22
24	24.000	72.00	48.00	48.00	36.00	0.375	23.250	0.562	22.876	0.969	22.062	1.531	20.938	1.812	20.376	2.062	19.876	24

WROUGHT STEEL BUTT-WELDING FITTINGS

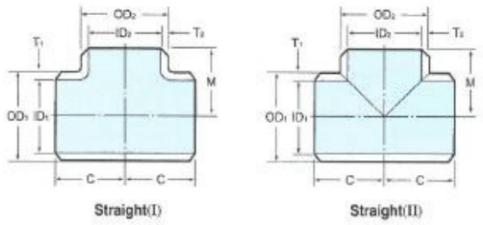
DOBEND

Straight Tee

Sch 5S, Sch 10S, STD, Sch40, XS, Sch 80, Sch 160, XXS

Material:

ASTM A234 WPB; A403 WP304/304L; A403 WP316/316L; A403 WP310S



ASME B16.9

Unit : Inch

Nominal Pipe Size	Outside Diameter OD	Center to End		STD		Sch 40		XS		Sch 80		Sch 160		XXS		Nominal Pipe Size
		Run C	Outlet M	T	ID	T	ID	T	ID	T	ID	T	ID	T	ID	
1/2	0.840	1.00	1.00	0.109	0.622	0.109	0.622	0.147	0.546	0.147	0.546	0.188	0.464	0.294	0.252	1/2
3/4	1.050	1.12	1.12	0.113	0.824	0.113	0.824	0.154	0.742	0.154	0.742	0.218	0.614	0.308	0.434	3/4
1	1.315	1.50	1.50	0.133	1.049	0.133	1.049	0.179	0.957	0.179	0.957	0.250	0.815	0.358	0.599	1
1.1/4	1.660	1.88	1.88	0.140	1.380	0.140	1.380	0.191	1.278	0.191	1.278	0.250	1.160	0.382	0.896	1.1/4
1.1/2	1.900	2.25	2.25	0.145	1.610	0.145	1.610	0.200	1.500	0.200	1.500	0.281	1.338	0.400	1.100	1.1/2
2	2.375	2.50	2.50	0.154	2.067	0.154	2.067	0.218	1.939	0.218	1.939	0.344	1.687	0.436	1.503	2
2.1/2	2.875	3.00	3.00	0.203	2.469	0.203	2.469	0.276	2.323	0.276	2.323	0.375	2.125	0.552	1.771	2.1/2
3	3.500	3.38	3.38	0.216	3.068	0.216	3.068	0.300	2.900	0.300	2.900	0.438	2.624	0.600	2.300	3
3.1/2	4.000	3.75	3.75	0.226	3.548	0.226	3.548	0.318	3.364	0.318	3.364	-	-	-	-	3.1/2
4	4.500	4.12	4.12	0.237	4.026	0.237	4.026	0.337	3.826	0.337	3.826	0.531	3.438	0.674	3.152	4
5	5.563	4.88	4.88	0.258	5.047	0.258	5.047	0.375	4.813	0.375	4.813	0.625	4.313	0.750	4.063	5
6	6.625	5.62	5.62	0.280	6.065	0.280	6.065	0.432	5.761	0.432	5.761	0.719	5.187	0.864	4.897	6
8	8.625	7.00	7.00	0.322	7.981	0.322	7.981	0.500	7.625	0.500	7.625	0.906	6.813	0.875	6.875	8
10	10.750	8.50	8.50	0.365	10.020	0.365	10.020	0.500	9.750	0.594	9.562	1.125	8.500	1.000	8.750	10
12	12.750	10.00	10.00	0.375	12.000	0.406	11.938	0.500	11.750	0.688	11.374	1.312	10.126	1.000	10.750	12
14	14.000	11.00	11.00	0.375	13.250	0.438	13.124	0.500	13.000	0.750	12.500	1.406	11.188	-	-	14
16	16.000	12.00	12.00	0.375	15.250	0.500	15.000	0.500	15.000	0.844	14.312	1.594	12.812	-	-	16
18	18.000	13.50	13.50	0.375	17.250	0.562	16.876	0.500	17.000	0.938	16.124	1.781	14.438	-	-	18
20	20.000	15.00	15.00	0.375	19.250	0.594	18.812	0.500	19.000	1.031	17.938	1.969	16.062	-	-	20
22	22.000	16.50	16.50	0.375	21.250	0.594	20.812	0.500	21.000	1.125	19.750	2.125	17.750	-	-	22
24	24.000	17.00	17.00	0.375	23.250	0.688	22.624	0.500	23.000	1.219	21.562	2.344	19.312	-	-	24
26	26.000	19.50	19.50	0.375	25.250	0.688	24.624	0.500	25.000	-	-	-	-	-	-	26
28	28.000	20.50	20.50	0.375	27.250	0.688	26.624	0.500	27.000	-	-	-	-	-	-	28
30	30.000	22.00	22.00	0.375	29.250	0.688	28.624	0.500	29.000	-	-	-	-	-	-	30
32	32.000	23.50	23.50	0.375	31.250	0.688	30.624	0.500	31.000	-	-	-	-	-	-	32
34	34.000	25.00	25.00	0.375	33.250	0.688	32.624	0.500	33.000	-	-	-	-	-	-	34
36	36.000	26.50	26.50	0.375	35.250	0.750	34.500	0.500	35.000	-	-	-	-	-	-	36
38	38.000	28.00	28.00	0.375	37.250	-	-	0.500	37.000	-	-	-	-	-	-	38
40	40.000	29.50	29.50	0.375	39.250	-	-	0.500	39.000	-	-	-	-	-	-	40
42	42.000	30.00	28.00	0.375	41.250	-	-	0.500	41.000	-	-	-	-	-	-	42
44	44.000	32.00	30.00	0.375	43.250	-	-	0.500	43.000	-	-	-	-	-	-	44
46	46.000	33.50	31.50	0.375	45.250	-	-	0.500	45.000	-	-	-	-	-	-	46
48	48.000	35.00	33.00	0.375	47.250	-	-	0.500	47.000	-	-	-	-	-	-	48
50	50.000	37.16	35.36	-	-	-	-	-	-	-	-	-	-	-	-	50
52	52.000	38.16	36.36	-	-	-	-	-	-	-	-	-	-	-	-	52
54	54.000	39.19	37.36	-	-	-	-	-	-	-	-	-	-	-	-	54
56	56.000	40.16	38.36	-	-	-	-	-	-	-	-	-	-	-	-	56
58	58.000	41.16	39.36	-	-	-	-	-	-	-	-	-	-	-	-	58
60	60.000	42.16	40.36	-	-	-	-	-	-	-	-	-	-	-	-	60

WROUGHT STEEL BUTT-WELDING FITTINGS

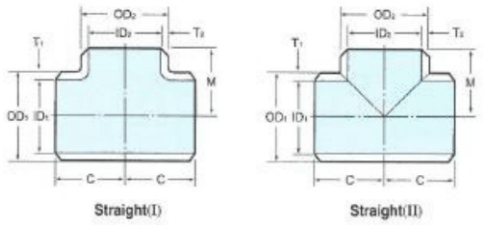
DOBEND

Straight Tee

Sch 5S, Sch 10S, STD, Sch40, XS,
Sch 80, Sch 160, XXS

Material:

ASTM A234 WPB; A403 WP304/304L;
A403 WP316/316L; A403 WP310S



ASME B16.9

Unit : Inch

Nominal Pipe Size	Outside Diameter		Center to End		STD		Sch 40		XS		Sch 80		Sch 160		XXS		Nominal Pipe Size
	OD1	OD2	Run C	Outlet M	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
1/2 x 1/2 x 3/8	0.840	0.675	1.00	1.00	0.109	0.091	0.109	0.091	0.147	0.126	0.147	0.126	-	-	-	-	1/2 x 1/2 x 3/8
1/2 x 1/2 x 1/4	0.840	0.540	1.00	1.00	0.109	0.088	0.109	0.088	0.147	0.119	0.147	0.119	-	-	-	-	1/2 x 1/2 x 1/4
3/4 x 3/4 x 1/2	1.050	0.840	1.12	1.12	0.113	0.109	0.113	0.109	0.154	0.147	0.154	0.147	0.218	0.188	0.308	0.294	3/4 x 3/4 x 1/2
3/4 x 3/4 x 3/8	1.050	0.675	1.12	1.12	0.113	0.091	0.113	0.091	0.154	0.126	0.154	0.126	-	-	-	-	3/4 x 3/4 x 3/8
1 x 1 x 3/4	1.315	1.105	1.50	1.50	0.113	0.113	0.133	0.113	0.179	0.154	0.179	0.154	0.250	0.218	0.358	0.308	1 x 1 x 3/4
1 x 1 x 1/2	1.315	0.840	1.50	1.50	0.113	0.109	0.133	0.109	0.179	0.147	0.179	0.147	0.250	0.188	0.358	0.294	1 x 1 x 1/2
1.1/4 x 1.1/4 x 1	1.660	1.315	1.88	1.88	0.140	0.133	0.140	0.133	0.191	0.179	0.191	0.179	0.250	0.250	0.382	0.358	1.1/4 x 1.1/4 x 1
1.1/4 x 1.1/4 x 3/4	1.660	1.105	1.88	1.88	0.140	0.113	0.140	0.113	0.191	0.154	0.191	0.154	0.250	0.218	0.382	0.308	1.1/4 x 1.1/4 x 3/4
1.1/4 x 1.1/4 x 1/2	1.660	0.840	1.88	1.88	0.140	0.109	0.140	0.109	0.191	0.147	0.191	0.147	0.250	0.188	0.382	0.294	1.1/4 x 1.1/4 x 1/2
1.1/2 x 1.1/2 x 1.1/4	1.900	1.660	2.25	2.25	0.145	0.140	0.145	0.140	0.200	0.191	0.200	0.191	0.281	0.250	0.400	0.382	1.1/2 x 1.1/2 x 1.1/4
1.1/2 x 1.1/2 x 1	1.900	1.315	2.25	2.25	0.145	0.133	0.145	0.133	0.200	0.179	0.200	0.179	0.281	0.250	0.400	0.358	1.1/2 x 1.1/2 x 1
1.1/2 x 1.1/2 x 3/4	1.900	1.105	2.25	2.25	0.145	0.113	0.145	0.113	0.200	0.154	0.200	0.154	0.281	0.218	0.400	0.308	1.1/2 x 1.1/2 x 3/4
1.1/2 x 1.1/2 x 1.1/2	1.900	0.840	2.25	2.25	0.145	0.109	0.145	0.109	0.200	0.147	0.200	0.147	0.281	0.188	0.400	0.294	1.1/2 x 1.1/2 x 1.1/2
2 x 2 x 1.1/2	2.375	1.900	2.50	2.38	0.154	0.145	0.154	0.145	0.218	0.200	0.218	0.200	0.344	0.281	0.436	0.400	2 x 2 x 1.1/2
2 x 2 x 1.1/4	2.375	1.660	2.50	2.25	0.154	0.140	0.154	0.140	0.218	0.191	0.218	0.191	0.344	0.250	0.436	0.382	2 x 2 x 1.1/4
2 x 2 x 1	2.375	1.315	2.50	2.00	0.154	0.133	0.154	0.133	0.218	0.179	0.218	0.179	0.344	0.250	0.436	0.358	2 x 2 x 1
2 x 2 x 1.3/4	2.375	1.050	2.50	1.75	0.154	0.113	0.154	0.113	0.218	0.154	0.218	0.154	0.344	0.218	0.436	0.308	2 x 2 x 1.3/4
2.1/2 x 2.1/2 x 2	2.875	2.375	3.00	2.75	0.203	0.154	0.203	0.154	0.276	0.218	0.276	0.218	0.375	0.344	0.552	0.436	2.1/2 x 2.1/2 x 2
2.1/2 x 2.1/2 x 1.1/2	2.875	1.900	3.00	2.62	0.203	0.145	0.203	0.145	0.276	0.200	0.276	0.200	0.375	0.281	0.552	0.400	2.1/2 x 2.1/2 x 1.1/2
2.1/2 x 2.1/2 x 1.1/4	2.875	1.660	3.00	2.50	0.203	0.140	0.203	0.140	0.276	0.191	0.276	0.191	0.375	0.250	0.552	0.382	2.1/2 x 2.1/2 x 1.1/4
2.1/2 x 2.1/2 x 1	2.875	1.315	3.00	2.25	0.203	0.133	0.203	0.133	0.276	0.179	0.276	0.179	0.375	0.250	0.552	0.358	2.1/2 x 2.1/2 x 1
3 x 3 x 2.1/2	3.500	2.875	3.38	3.25	0.216	0.203	0.216	0.203	0.300	0.276	0.300	0.276	0.438	0.375	0.600	0.552	3 x 3 x 2.1/2
3 x 3 x 2	3.500	2.375	3.38	3.00	0.216	0.154	0.216	0.154	0.300	0.218	0.300	0.218	0.438	0.344	0.600	0.436	3 x 3 x 2
3 x 3 x 1.1/2	3.500	1.900	3.38	2.88	0.216	0.145	0.216	0.145	0.300	0.200	0.300	0.200	0.438	0.281	0.600	0.400	3 x 3 x 1.1/2
3 x 3 x 1.1/4	3.500	1.660	3.38	2.75	0.216	0.140	0.216	0.140	0.300	0.191	0.300	0.191	0.438	0.250	0.600	0.382	3 x 3 x 1.1/4
3.1/2 x 3.1/2 x 3	4.000	3.500	3.75	3.62	0.226	0.216	0.226	0.216	0.318	0.300	0.318	0.300	-	-	-	-	3.1/2 x 3.1/2 x 3
3.1/2 x 3.1/2 x 2.1/2	4.000	2.875	3.75	3.50	0.226	0.203	0.226	0.203	0.318	0.276	0.318	0.276	-	-	-	-	3.1/2 x 3.1/2 x 2.1/2
3.1/2 x 3.1/2 x 2	4.000	2.375	3.75	3.25	0.226	0.154	0.226	0.154	0.318	0.218	0.318	0.218	-	-	-	-	3.1/2 x 3.1/2 x 2
3.1/2 x 3.1/2 x 1.1/2	4.000	1.900	3.75	3.12	0.226	0.145	0.226	0.145	0.318	0.200	0.318	0.200	-	-	-	-	3.1/2 x 3.1/2 x 1.1/2
4 x 4 x 3.1/2	4.500	4.000	4.12	4.00	0.237	0.226	0.237	0.226	0.337	0.318	0.337	0.318	-	-	-	-	4 x 4 x 3.1/2
4 x 4 x 3	4.500	3.500	4.12	3.88	0.237	0.216	0.237	0.216	0.337	0.300	0.337	0.300	0.531	0.438	0.674	0.600	4 x 4 x 3
4 x 4 x 2.1/2	4.500	2.875	4.12	3.75	0.237	0.203	0.237	0.203	0.337	0.276	0.337	0.276	0.531	0.375	0.674	0.552	4 x 4 x 2.1/2
4 x 4 x 2	4.500	2.375	4.12	3.50	0.237	0.154	0.237	0.154	0.337	0.218	0.337	0.218	0.531	0.344	0.674	0.436	4 x 4 x 2
4 x 4 x 1.1/2	4.500	1.900	4.12	3.38	0.237	0.145	0.237	0.145	0.337	0.200	0.337	0.200	0.531	0.281	0.674	0.400	4 x 4 x 1.1/2
5 x 5 x 4	5.563	4.500	4.88	4.62	0.258	0.237	0.258	0.237	0.375	0.337	0.375	0.337	0.625	0.531	0.750	0.674	5 x 5 x 4
5 x 5 x 3.1/2	5.563	4.000	4.88	4.50	0.258	0.226	0.258	0.226	0.375	0.318	0.375	0.318	-	-	-	-	5 x 5 x 3.1/2
5 x 5 x 3	5.563	3.500	4.88	4.38	0.258	0.216	0.258	0.216	0.375	0.300	0.375	0.300	0.625	0.438	0.750	0.600	5 x 5 x 3
5 x 5 x 2.1/2	5.563	2.875	4.88	4.25	0.258	0.203	0.258	0.203	0.375	0.276	0.375	0.276	0.625	0.375	0.750	0.552	5 x 5 x 2.1/2
5 x 5 x 2	5.563	2.375	4.88	4.12	0.258	0.154	0.258	0.154	0.375	0.218	0.375	0.218	0.625	0.344	0.750	0.436	5 x 5 x 2
6 x 6 x 5	6.625	5.563	5.62	5.38	0.280	0.258	0.280	0.258	0.432	0.375	0.432	0.375	0.719	0.625	0.864	0.750	6 x 6 x 5
6 x 6 x 4	6.625	4.500	5.62	5.12	0.280	0.237	0.280	0.237	0.432	0.337	0.432	0.337	0.719	0.531	0.864	0.674	6 x 6 x 4
6 x 6 x 3.1/2	6.625	4.000	5.62	5.00	0.280	0.226	0.280	0.226	0.432	0.318	0.432	0.318	-	-	-	-	6 x 6 x 3.1/2
6 x 6 x 3	6.625	3.500	5.62	4.88	0.280	0.216	0.280	0.216	0.432	0.300	0.432	0.300	0.719	0.438	0.864	0.600	6 x 6 x 3
6 x 6 x 2.1/2	6.625	2.875	5.62	4.75	0.280	0.203	0.280	2.030	0.432	0.276	0.432	0.276	0.719	0.375	0.864	0.552	6 x 6 x 2.1/2

WROUGHT STEEL BUTT-WELDING FITTINGS

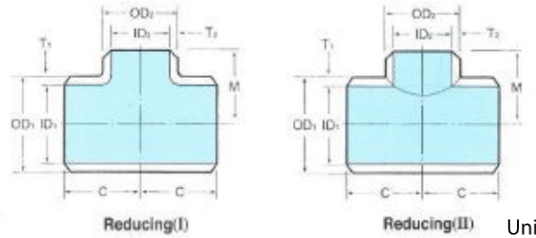
DOBEND

Reducing Tee

Sch 5S, Sch 10S, STD, Sch40, XS, Sch 80, Sch 160, XXS

Material:

ASTM A234 WPB; A403 WP304/304L; A403 WP316/316L; A403 WP310S



ASME B16.9

Unit : Inch

Nominal Pipe Size	Outside Diameter		Center to End		STD		Sch 40		XS		Sch 80		Sch 160		XXS		Nominal Pipe Size
	OD1	OD2	Run C	Outlet M	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
8 x 8 x 6	8.625	6.625	7.00	6.62	0.322	0.280	0.322	0.280	0.500	0.432	0.500	0.432	0.906	0.719	0.875	0.864	8 x 8 x 6
8 x 8 x 5	8.625	5.563	7.00	6.38	0.322	0.258	0.322	0.258	0.500	0.375	0.500	0.375	0.906	0.625	0.875	0.750	8 x 8 x 5
8 x 8 x 4	8.625	4.500	7.00	6.12	0.322	0.237	0.322	0.237	0.500	0.318	0.500	0.337	0.906	0.531	0.875	0.674	8 x 8 x 4
8 x 8 x 3.1/2	8.625	4.000	7.00	6.00	0.322	0.226	0.322	0.226	0.500	0.300	0.500	0.318	-	-	-	-	8 x 8 x 3.1/2
10 x 10 x 8	10.750	8.625	8.50	8.00	0.365	0.322	0.365	0.322	0.500	0.500	0.594	0.500	1.125	0.906	1.000	0.875	10 x 10 x 8
10 x 10 x 6	10.750	6.625	8.50	7.62	0.365	0.280	0.365	0.280	0.500	0.432	0.594	0.432	1.125	0.719	1.000	0.864	10 x 10 x 6
10 x 10 x 5	10.750	5.563	8.50	7.50	0.365	0.258	0.365	0.258	0.500	0.375	0.594	0.375	1.125	0.625	1.000	0.750	10 x 10 x 5
10 x 10 x 4	10.750	4.500	8.50	7.25	0.365	0.237	0.365	0.237	0.500	0.318	0.594	0.318	1.125	0.531	1.000	0.674	10 x 10 x 4
12 x 12 x 10	12.750	10.750	10.00	9.50	0.375	0.365	0.406	0.365	0.500	0.500	0.688	0.594	1.312	1.125	1.000	1.000	12 x 12 x 10
12 x 12 x 8	12.750	8.625	10.00	9.00	0.375	0.322	0.406	0.322	0.500	0.500	0.688	0.500	1.312	0.906	1.000	0.875	12 x 12 x 8
12 x 12 x 6	12.750	6.625	10.00	8.62	0.375	0.280	0.406	0.280	0.500	0.432	0.688	0.432	1.312	0.719	1.000	0.864	12 x 12 x 6
12 x 12 x 5	12.750	5.563	10.00	8.50	0.375	0.258	0.406	0.258	0.500	0.375	0.688	0.375	1.312	0.625	1.000	0.750	12 x 12 x 5
14 x 14 x 12	14.000	12.750	11.00	10.62	0.375	0.375	0.438	0.406	0.500	0.500	0.750	0.688	1.406	1.312	-	-	14 x 14 x 12
14 x 14 x 10	14.000	10.750	11.00	10.12	0.375	0.365	0.438	0.365	0.500	0.500	0.750	0.594	1.406	1.125	-	-	14 x 14 x 10
14 x 14 x 8	14.000	8.625	11.00	9.75	0.375	0.322	0.438	0.322	0.500	0.500	0.750	0.500	1.406	0.906	-	-	14 x 14 x 8
14 x 14 x 6	14.000	6.625	11.00	9.38	0.375	0.280	0.438	0.280	0.500	0.432	0.750	0.432	1.406	0.719	-	-	14 x 14 x 6
16 x 16 x 14	16.000	14.000	12.00	12.00	0.375	0.375	0.500	0.438	0.500	0.500	0.844	0.750	1.594	1.406	-	-	16 x 16 x 14
16 x 16 x 12	16.000	12.750	12.00	11.62	0.375	0.375	0.500	0.406	0.500	0.500	0.844	0.688	1.594	1.312	-	-	16 x 16 x 12
16 x 16 x 10	16.000	10.750	12.00	11.12	0.375	0.365	0.500	0.365	0.500	0.500	0.844	0.594	1.594	1.125	-	-	16 x 16 x 10
16 x 16 x 8	16.000	8.625	12.00	10.75	0.375	0.322	0.500	0.322	0.500	0.500	0.844	0.500	1.594	0.906	-	-	16 x 16 x 8
16 x 16 x 6	16.000	6.625	12.00	10.38	0.375	0.280	0.500	0.280	0.500	0.432	0.844	0.432	1.594	0.719	-	-	16 x 16 x 6
18 x 18 x 16	18.000	16.000	13.50	13.00	0.375	0.375	0.562	0.500	0.500	0.500	0.938	0.844	1.781	1.594	-	-	18 x 18 x 16
18 x 18 x 14	18.000	14.000	13.50	13.00	0.375	0.375	0.562	0.438	0.500	0.500	0.938	0.750	1.781	1.406	-	-	18 x 18 x 14
18 x 18 x 12	18.000	12.750	13.50	12.62	0.375	0.375	0.562	0.406	0.500	0.500	0.938	0.688	1.781	1.312	-	-	18 x 18 x 12
18 x 18 x 10	18.000	10.750	13.50	12.12	0.375	0.365	0.562	0.365	0.500	0.500	0.938	0.594	1.781	1.125	-	-	18 x 18 x 10
18 x 18 x 8	18.000	8.625	13.50	11.72	0.375	0.322	0.562	0.322	0.500	0.500	0.938	0.500	1.781	0.906	-	-	18 x 18 x 8
20 x 20 x 18	20.000	18.000	15.00	14.50	0.375	0.375	0.594	0.562	0.500	0.500	1.031	0.938	1.969	1.781	-	-	20 x 20 x 18
20 x 20 x 16	20.000	16.000	15.00	14.00	0.375	0.375	0.594	0.500	0.500	0.500	1.031	0.844	1.969	1.594	-	-	20 x 20 x 16
20 x 20 x 14	20.000	14.000	15.00	14.00	0.375	0.375	0.594	0.438	0.500	0.500	1.031	0.750	1.969	1.406	-	-	20 x 20 x 14
20 x 20 x 12	20.000	12.750	15.00	13.62	0.375	0.375	0.594	0.406	0.500	0.500	1.031	0.688	1.969	1.312	-	-	20 x 20 x 12
20 x 20 x 10	20.000	10.750	15.00	13.12	0.375	0.365	0.594	0.365	0.500	0.500	1.031	0.594	1.969	1.125	-	-	20 x 20 x 10
20 x 20 x 8	20.000	8.625	15.00	12.75	0.375	0.322	0.594	0.322	0.500	0.500	1.031	0.500	1.969	0.906	-	-	20 x 20 x 8
22 x 22 x 20	22.000	20.000	16.50	16.00	0.375	0.375	0.594	0.594	0.500	0.500	1.125	1.031	2.125	1.969	-	-	22 x 22 x 20
22 x 22 x 18	22.000	18.000	16.50	15.50	0.375	0.375	0.594	0.562	0.500	0.500	1.125	0.938	2.125	1.781	-	-	22 x 22 x 18
22 x 22 x 16	22.000	16.000	16.50	15.00	0.375	0.375	0.594	0.500	0.500	0.500	1.125	0.844	2.125	1.594	-	-	22 x 22 x 16
22 x 22 x 14	22.000	14.000	16.50	15.00	0.375	0.375	0.594	0.438	0.500	0.500	1.125	0.750	2.125	1.406	-	-	22 x 22 x 14
22 x 22 x 12	22.000	12.750	16.50	14.62	0.375	0.375	0.594	0.406	0.500	0.500	1.125	0.688	2.125	1.312	-	-	22 x 22 x 12
22 x 22 x 10	22.000	10.750	16.50	14.12	0.375	0.365	0.594	0.365	0.500	0.500	1.125	0.594	2.125	1.125	-	-	22 x 22 x 10
24 x 24 x 22	24.000	22.000	17.00	17.00	0.375	0.375	-	-	0.500	0.500	1.219	1.125	2.344	2.125	-	-	24 x 24 x 22
24 x 24 x 20	24.000	20.000	17.00	17.00	0.375	0.375	0.688	0.594	0.500	0.500	1.219	1.031	2.344	1.969	-	-	24 x 24 x 20
24 x 24 x 18	24.000	18.000	17.00	16.50	0.375	0.375	0.688	0.562	0.500	0.500	1.219	0.938	2.344	1.781	-	-	24 x 24 x 18
24 x 24 x 16	24.000	16.000	17.00	16.00	0.375	0.375	0.688	0.500	0.500	0.500	1.219	0.844	2.344	1.594	-	-	24 x 24 x 16
24 x 24 x 14	24.000	14.000	17.00	16.00	0.375	0.375	0.688	0.438	0.500	0.500	1.219	0.750	2.344	1.406	-	-	24 x 24 x 14
24 x 24 x 12	24.000	12.750	17.00	15.62	0.375	0.375	0.688	0.406	0.500	0.500	1.219	0.688	2.344	1.312	-	-	24 x 24 x 12
24 x 24 x 10	24.000	10.750	17.00	15.12	0.375	0.365	0.688	0.365	0.500	0.500	1.219	0.594	2.344	1.125	-	-	24 x 24 x 10

WROUGHT STEEL BUTT-WELDING FITTINGS

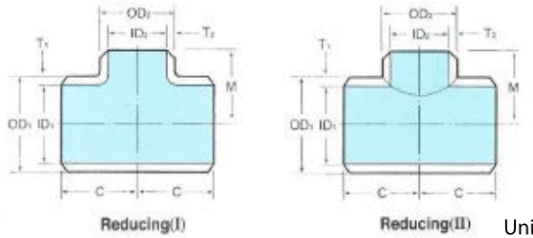
DOBEND

Reducing Tee

Sch 5S, Sch 10S, STD, Sch40, XS

Material:

ASTM A234 WPB; A403 WP304/304L; A403 WP316/316L; A403 WP310S



ASME B16.9

Unit : Inch

Nominal Pipe Size	Outside Diameter		Center to End		STD		Sch 40		XS		Nominal Pipe Size
	OD1	OD2	Run C	Outlet M	T1	T2	T1	T2	T1	T2	
26 x 26 x 24	26.000	24.000	19.50	19.00	0.375	0.375	0.688	0.688	0.500	0.500	26 x 26 x 24
26 x 26 x 22	26.000	22.000	19.50	18.50	0.375	0.375	0.688	0.594	0.500	0.500	26 x 26 x 22
26 x 26 x 20	26.000	20.000	19.50	18.00	0.375	0.375	0.688	0.594	0.500	0.500	26 x 26 x 20
26 x 26 x 18	26.000	18.000	19.50	17.50	0.375	0.375	0.688	0.562	0.500	0.500	26 x 26 x 18
26 x 26 x 16	26.000	16.000	19.50	17.00	0.375	0.375	0.688	0.500	0.500	0.500	26 x 26 x 16
26 x 26 x 14	26.000	14.000	19.50	17.00	0.375	0.375	0.688	0.438	0.500	0.500	26 x 26 x 14
26 x 26 x 12	26.000	12.750	19.50	16.62	0.375	0.375	0.688	0.406	0.500	0.500	26 x 26 x 12
28 x 28 x 26	28.000	26.000	20.50	20.50	0.375	0.375	0.688	0.688	0.500	0.500	28 x 28 x 26
28 x 28 x 24	28.000	24.000	20.50	20.00	0.375	0.375	0.688	0.688	0.500	0.500	28 x 28 x 24
28 x 28 x 22	28.000	22.000	20.50	19.50	0.375	0.375	0.688	0.594	0.500	0.500	28 x 28 x 22
28 x 28 x 20	28.000	20.000	20.50	19.00	0.375	0.375	0.688	0.594	0.500	0.500	28 x 28 x 20
28 x 28 x 18	28.000	18.000	20.50	18.50	0.375	0.375	0.688	0.562	0.500	0.500	28 x 28 x 18
28 x 28 x 16	28.000	16.000	20.50	18.00	0.375	0.375	0.688	0.500	0.500	0.500	28 x 28 x 16
28 x 28 x 14	28.000	14.000	20.50	18.00	0.375	0.375	0.688	0.438	0.500	0.500	28 x 28 x 14
28 x 28 x 12	28.000	12.750	20.50	17.62	0.375	0.375	0.688	0.406	0.500	0.500	28 x 28 x 12
30 x 30 x 28	30.000	28.000	22.00	21.50	0.375	0.375	0.688	0.688	0.500	0.500	30 x 30 x 28
30 x 30 x 26	30.000	26.000	22.00	21.50	0.375	0.375	0.688	0.688	0.500	0.500	30 x 30 x 26
30 x 30 x 24	30.000	24.000	22.00	21.00	0.375	0.375	0.688	0.688	0.500	0.500	30 x 30 x 24
30 x 30 x 22	30.000	22.000	22.00	20.50	0.375	0.375	0.688	0.594	0.500	0.500	30 x 30 x 22
30 x 30 x 20	30.000	20.000	22.00	20.00	0.375	0.375	0.688	0.594	0.500	0.500	30 x 30 x 20
30 x 30 x 18	30.000	18.000	22.00	19.50	0.375	0.375	0.688	0.562	0.500	0.500	30 x 30 x 18
30 x 30 x 16	30.000	16.000	22.00	19.00	0.375	0.375	0.688	0.500	0.500	0.500	30 x 30 x 16
30 x 30 x 14	30.000	14.000	22.00	19.00	0.375	0.375	0.688	0.438	0.500	0.500	30 x 30 x 14
30 x 30 x 12	30.000	12.750	22.00	18.62	0.375	0.375	0.688	0.406	0.500	0.500	30 x 30 x 12
30 x 30 x 10	30.000	10.750	22.00	18.12	0.375	0.365	0.688	0.365	0.500	0.500	30 x 30 x 10
32 x 32 x 30	32.000	30.000	23.50	23.00	0.375	0.375	0.688	0.688	0.500	0.500	32 x 32 x 30
32 x 32 x 28	32.000	28.000	23.50	22.50	0.375	0.375	0.688	0.688	0.500	0.500	32 x 32 x 28
32 x 32 x 26	32.000	26.000	23.50	22.50	0.375	0.375	0.688	0.688	0.500	0.500	32 x 32 x 26
32 x 32 x 24	32.000	24.000	23.50	22.00	0.375	0.375	0.688	0.688	0.500	0.500	32 x 32 x 24
32 x 32 x 22	32.000	22.000	23.50	21.50	0.375	0.375	0.688	0.594	0.500	0.500	32 x 32 x 22
32 x 32 x 20	32.000	20.000	23.50	21.00	0.375	0.375	0.688	0.594	0.500	0.500	32 x 32 x 20
32 x 32 x 18	32.000	18.000	23.50	20.50	0.375	0.375	0.688	0.562	0.500	0.500	32 x 32 x 18
32 x 32 x 16	32.000	16.000	23.50	20.00	0.375	0.375	0.688	0.500	0.500	0.500	32 x 32 x 16
32 x 32 x 14	32.000	14.000	23.50	20.00	0.375	0.375	0.688	0.438	0.500	0.500	32 x 32 x 14

Unit : Inch

Nominal Pipe Size	Outside Diameter		Center to End		STD		Sch 40		XS		Nominal Pipe Size
	OD1	OD2	Run C	Outlet M	T1	T2	T1	T2	T1	T2	
34 x 34 x 32	34.000	32.000	25.00	24.50	0.375	0.375	0.688	0.688	0.500	0.500	34 x 34 x 32
34 x 34 x 30	34.000	30.000	25.00	24.00	0.375	0.375	0.688	0.688	0.500	0.500	34 x 34 x 30
34 x 34 x 28	34.000	28.000	25.00	23.50	0.375	0.375	0.688	0.688	0.500	0.500	34 x 34 x 28
34 x 34 x 26	34.000	26.000	25.00	23.50	0.375	0.375	0.688	0.688	0.500	0.500	34 x 34 x 26
34 x 34 x 24	34.000	24.000	25.00	23.00	0.375	0.375	0.688	0.688	0.500	0.500	34 x 34 x 24
34 x 34 x 22	34.000	22.000	25.00	22.50	0.375	0.375	0.688	0.594	0.500	0.500	34 x 34 x 22
34 x 34 x 20	34.000	20.000	25.00	22.00	0.375	0.375	0.688	0.594	0.500	0.500	34 x 34 x 20
34 x 34 x 18	34.000	18.000	25.00	21.50	0.375	0.375	0.688	0.562	0.500	0.500	34 x 34 x 18
34 x 34 x 16	34.000	16.000	25.00	21.00	0.375	0.375	0.688	0.500	0.500	0.500	34 x 34 x 16
36 x 36 x 34	36.000	34.000	26.50	26.00	0.375	0.375	0.750	0.688	0.500	0.500	36 x 36 x 34
36 x 36 x 32	36.000	32.000	26.50	25.50	0.375	0.375	0.750	0.688	0.500	0.500	36 x 36 x 32
36 x 36 x 30	36.000	30.000	26.50	25.00	0.375	0.375	0.750	0.688	0.500	0.500	36 x 36 x 30
36 x 36 x 28	36.000	28.000	26.50	24.50	0.375	0.375	0.750	0.688	0.500	0.500	36 x 36 x 28
36 x 36 x 26	36.000	26.000	26.50	24.50	0.375	0.375	0.750	0.688	0.500	0.500	36 x 36 x 26
36 x 36 x 24	36.000	24.000	26.50	24.00	0.375	0.375	0.750	0.688	0.500	0.500	36 x 36 x 24
36 x 36 x 22	36.000	22.000	26.50	23.50	0.375	0.375	0.750	0.594	0.500	0.500	36 x 36 x 22
36 x 36 x 20	36.000	20.000	26.50	23.00	0.375	0.375	0.750	0.594	0.500	0.500	36 x 36 x 20
36 x 36 x 18	36.000	18.000	26.50	22.50	0.375	0.375	0.750	0.562	0.500	0.500	36 x 36 x 18
36 x 36 x 16	36.000	16.000	26.50	22.00	0.375	0.375	0.750	0.500	0.500	0.500	36 x 36 x 16
38 x 38 x 36	38.000	36.000	28.00	28.00	0.375	0.375	-	-	0.500	0.500	38 x 38 x 36
38 x 38 x 34	38.000	34.000	28.00	27.50	0.375	0.375	-	-	0.500	0.500	38 x 38 x 34
38 x 38 x 32	38.000	32.000	28.00	27.00	0.375	0.375	-	-	0.500	0.500	38 x 38 x 32
38 x 38 x 30	38.000	30.000	28.00	26.50	0.375	0.375	-	-	0.500	0.500	38 x 38 x 30
38 x 38 x 28	38.000	28.000	28.00	25.50	0.375	0.375	-	-	0.500	0.500	38 x 38 x 28
38 x 38 x 26	38.000	26.000	28.00	25.50	0.375	0.375	-	-	0.500	0.500	38 x 38 x 26
38 x 38 x 24	38.000	24.000	28.00	25.00	0.375	0.375	-	-	0.500	0.500	38 x 38 x 24
38 x 38 x 22	38.000	22.000	28.00	24.50	0.375	0.375	-	-	0.500	0.500	38 x 38 x 22
38 x 38 x 20	38.000	20.000	28.00	24.00	0.375	0.375	-	-	0.500	0.500	38 x 38 x 20
38 x 38 x 18	38.000	18.000	28.00	23.50	0.375	0.375	-	-	0.500	0.500	38 x 38 x 18

WROUGHT STEEL BUTT-WELDING FITTINGS

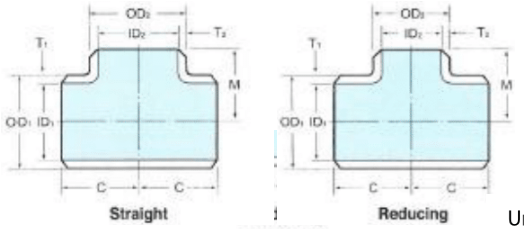
DOBEND

Reducing Tee

Sch 5S, Sch 10S, STD, XS

Material:

ASTM A234 WPB; A403 WP304/304L; A403 WP316/316L; A403 WP310S



ASME B16.9

Unit : Inch

Nominal Pipe Size	Outside Diameter		Center to End		STD		XS		Nominal Pipe Size
	OD1	OD2	Run C	Outlet M	T1	T2	T1	T2	
40 x 40 x 38	40.000	38.000	29.50	29.50	0.375	0.375	0.500	0.500	40 x 40 x 38
40 x 40 x 36	40.000	36.000	29.50	29.00	0.375	0.375	0.500	0.500	40 x 40 x 36
40 x 40 x 34	40.000	34.000	29.50	28.50	0.375	0.375	0.500	0.500	40 x 40 x 34
40 x 40 x 32	40.000	32.000	29.50	28.00	0.375	0.375	0.500	0.500	40 x 40 x 32
40 x 40 x 30	40.000	30.000	29.50	27.50	0.375	0.375	0.500	0.500	40 x 40 x 30
40 x 40 x 28	40.000	28.000	29.50	26.50	0.375	0.375	0.500	0.500	40 x 40 x 28
40 x 40 x 26	40.000	26.000	29.50	26.50	0.375	0.375	0.500	0.500	40 x 40 x 26
40 x 40 x 24	40.000	24.000	29.50	26.00	0.375	0.375	0.500	0.500	40 x 40 x 24
40 x 40 x 22	40.000	22.000	29.50	25.50	0.375	0.375	0.500	0.500	40 x 40 x 22
40 x 40 x 20	40.000	20.000	29.50	25.00	0.375	0.375	0.500	0.500	40 x 40 x 20
40 x 40 x 18	40.000	18.000	29.50	24.50	0.375	0.375	0.500	0.500	40 x 40 x 18
42 x 42 x 40	42.000	40.000	30.00	28.00	0.375	0.375	0.500	0.500	42 x 42 x 40
42 x 42 x 38	42.000	38.000	30.00	28.00	0.375	0.375	0.500	0.500	42 x 42 x 38
42 x 42 x 36	42.000	36.000	30.00	28.00	0.375	0.375	0.500	0.500	42 x 42 x 36
42 x 42 x 34	42.000	34.000	30.00	28.00	0.375	0.375	0.500	0.500	42 x 42 x 34
42 x 42 x 32	42.000	32.000	30.00	28.00	0.375	0.375	0.500	0.500	42 x 42 x 32
42 x 42 x 30	42.000	30.000	30.00	28.00	0.375	0.375	0.500	0.500	42 x 42 x 30
42 x 42 x 28	42.000	28.000	30.00	27.50	0.375	0.375	0.500	0.500	42 x 42 x 28
42 x 42 x 26	42.000	26.000	30.00	27.50	0.375	0.375	0.500	0.500	42 x 42 x 26
42 x 42 x 24	42.000	24.000	30.00	26.00	0.375	0.375	0.500	0.500	42 x 42 x 24
42 x 42 x 22	42.000	22.000	30.00	26.00	0.375	0.375	0.500	0.500	42 x 42 x 22
42 x 42 x 20	42.000	20.000	30.00	26.00	0.375	0.375	0.500	0.500	42 x 42 x 20
42 x 42 x 18	42.000	18.000	30.00	25.50	0.375	0.375	0.500	0.500	42 x 42 x 18
42 x 42 x 16	42.000	16.000	30.00	25.00	0.375	0.375	0.500	0.500	42 x 42 x 16
44 x 44 x 42	44.000	42.000	32.00	30.00	0.375	0.375	0.500	0.500	44 x 44 x 42
44 x 44 x 40	44.000	40.000	32.00	29.50	0.375	0.375	0.500	0.500	44 x 44 x 40
44 x 44 x 38	44.000	38.000	32.00	29.00	0.375	0.375	0.500	0.500	44 x 44 x 38
44 x 44 x 36	44.000	36.000	32.00	28.50	0.375	0.375	0.500	0.500	44 x 44 x 36
44 x 44 x 34	44.000	34.000	32.00	28.50	0.375	0.375	0.500	0.500	44 x 44 x 34
44 x 44 x 32	44.000	32.000	32.00	28.00	0.375	0.375	0.500	0.500	44 x 44 x 32
44 x 44 x 30	44.000	30.000	32.00	28.00	0.375	0.375	0.500	0.500	44 x 44 x 30
44 x 44 x 28	44.000	28.000	32.00	27.50	0.375	0.375	0.500	0.500	44 x 44 x 28
44 x 44 x 26	44.000	26.000	32.00	27.50	0.375	0.375	0.500	0.500	44 x 44 x 26
44 x 44 x 24	44.000	24.000	32.00	27.50	0.375	0.375	0.500	0.500	44 x 44 x 24
44 x 44 x 22	44.000	22.000	32.00	27.00	0.375	0.375	0.500	0.500	44 x 44 x 22
44 x 44 x 20	44.000	20.000	32.00	27.00	0.375	0.375	0.500	0.500	44 x 44 x 20

Unit : Inch

Nominal Pipe Size	Outside Diameter		Center to End		STD		XS		Nominal Pipe Size
	OD1	OD2	Run C	Outlet M	T1	T2	T1	T2	
46 x 46 x 44	46.000	44.000	33.50	31.50	0.375	0.375	0.500	0.500	46 x 46 x 44
46 x 46 x 42	46.000	42.000	33.50	31.00	0.375	0.375	0.500	0.500	46 x 46 x 42
46 x 46 x 40	46.000	40.000	33.50	30.50	0.375	0.375	0.500	0.500	46 x 46 x 40
46 x 46 x 38	46.000	38.000	33.50	30.00	0.375	0.375	0.500	0.500	46 x 46 x 38
46 x 46 x 36	46.000	36.000	33.50	30.00	0.375	0.375	0.500	0.500	46 x 46 x 36
46 x 46 x 34	46.000	34.000	33.50	29.50	0.375	0.375	0.500	0.500	46 x 46 x 34
46 x 46 x 32	46.000	32.000	33.50	29.50	0.375	0.375	0.500	0.500	46 x 46 x 32
46 x 46 x 30	46.000	30.000	33.50	29.00	0.375	0.375	0.500	0.500	46 x 46 x 30
46 x 46 x 28	46.000	28.000	33.50	29.00	0.375	0.375	0.500	0.500	46 x 46 x 28
46 x 46 x 26	46.000	26.000	33.50	29.00	0.375	0.375	0.500	0.500	46 x 46 x 26
46 x 46 x 24	46.000	24.000	33.50	28.50	0.375	0.375	0.500	0.500	46 x 46 x 24
46 x 46 x 22	46.000	22.000	33.50	28.50	0.375	0.375	0.500	0.500	46 x 46 x 22
48 x 48 x 46	48.000	46.000	35.00	33.00	0.375	0.375	0.500	0.500	48 x 48 x 46
48 x 48 x 44	48.000	44.000	35.00	33.00	0.375	0.375	0.500	0.500	48 x 48 x 44
48 x 48 x 42	48.000	42.000	35.00	32.00	0.375	0.375	0.500	0.500	48 x 48 x 42
48 x 48 x 40	48.000	40.000	35.00	32.00	0.375	0.375	0.500	0.500	48 x 48 x 40
48 x 48 x 38	48.000	38.000	35.00	32.00	0.375	0.375	0.500	0.500	48 x 48 x 38
48 x 48 x 36	48.000	36.000	35.00	31.00	0.375	0.375	0.500	0.500	48 x 48 x 36
48 x 48 x 34	48.000	34.000	35.00	31.00	0.375	0.375	0.500	0.500	48 x 48 x 34
48 x 48 x 32	48.000	32.000	35.00	31.00	0.375	0.375	0.500	0.500	48 x 48 x 32
48 x 48 x 30	48.000	30.000	35.00	30.00	0.375	0.375	0.500	0.500	48 x 48 x 30
48 x 48 x 28	48.000	28.000	35.00	30.00	0.375	0.375	0.500	0.500	48 x 48 x 28
48 x 48 x 26	48.000	26.000	35.00	30.00	0.375	0.375	0.500	0.500	48 x 48 x 26
48 x 48 x 24	48.000	24.000	35.00	29.00	0.375	0.375	0.500	0.500	48 x 48 x 24
48 x 48 x 22	48.000	22.000	35.00	29.00	0.375	0.375	0.500	0.500	48 x 48 x 22

WROUGHT STEEL BUTT-WELDING FITTINGS

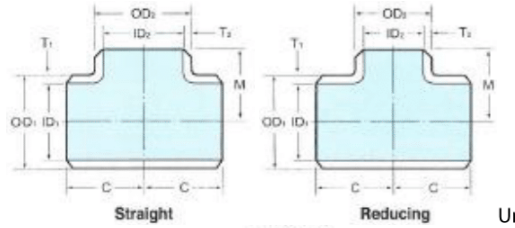
DOBEND

Straight Tee
Reducing Tee

Sch 5S, Sch 10S, Sch 20, Sch 30, Sch 60, Sch 100, Sch 120, Sch 140

Material:

ASTM A234 WPB; A403 WP304/304L; A403 WP316/316L; A403 WP310S



ASME B16.9

Unit : Inch

Nominal Pipe Size	Outside Diameter		Center to End		Sch 20		Sch 30		Sch 60		Sch 100		Sch 120		Sch 140		Nominal Pipe Size
	OD1	OD2	Run C	Outlet M	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
4 x 4 x 4	4.500	4.500	4.12	4.12	-	-	-	-	-	-	-	-	0.438	0.438	-	-	4 x 4 x 4
5 x 5 x 5	5.563	5.563	4.88	4.88	-	-	-	-	-	-	-	-	0.500	0.500	-	-	5 x 5 x 5
5 x 5 x 4	5.563	4.500	4.88	4.62	-	-	-	-	-	-	-	-	0.500	0.438	-	-	5 x 5 x 4
6 x 6 x 6	6.625	6.625	5.62	5.62	-	-	-	-	-	-	-	-	0.562	0.562	-	-	6 x 6 x 6
6 x 6 x 5	6.625	5.563	5.62	5.38	-	-	-	-	-	-	-	-	0.562	0.500	-	-	6 x 6 x 5
6 x 6 x 4	6.625	4.500	5.62	5.12	-	-	-	-	-	-	-	-	0.562	0.438	-	-	6 x 6 x 4
8 x 8 x 8	8.625	8.625	7.00	7.00	0.250	0.250	0.277	0.277	0.406	0.406	0.594	0.594	0.719	0.719	0.812	0.812	8 x 8 x 8
8 x 8 x 6	8.625	6.625	7.00	6.62	-	-	-	-	-	-	-	-	0.719	0.562	-	-	8 x 8 x 6
8 x 8 x 5	8.625	5.563	7.00	6.38	-	-	-	-	-	-	-	-	0.719	0.500	-	-	8 x 8 x 5
8 x 8 x 4	8.625	4.500	7.00	6.12	-	-	-	-	-	-	-	-	0.719	0.438	-	-	8 x 8 x 4
10 x 10 x 10	10.750	10.750	8.50	8.50	0.250	0.250	0.307	0.307	0.500	0.500	0.719	0.719	0.844	0.844	1.000	1.000	10 x 10 x 10
10 x 10 x 8	10.750	8.625	8.50	8.00	0.250	0.250	0.307	0.277	0.500	0.406	0.719	0.594	0.844	0.719	1.000	0.812	10 x 10 x 8
10 x 10 x 6	10.750	6.625	8.50	7.62	-	-	-	-	-	-	-	-	0.844	0.562	-	-	10 x 10 x 6
10 x 10 x 5	10.750	5.563	8.50	7.50	-	-	-	-	-	-	-	-	0.844	0.500	-	-	10 x 10 x 5
10 x 10 x 4	10.750	4.500	8.50	7.25	-	-	-	-	-	-	-	-	0.844	0.438	-	-	10 x 10 x 4
12 x 12 x 12	12.750	12.750	10.00	10.00	0.250	0.250	0.330	0.330	0.562	0.562	0.844	0.844	1.000	1.000	1.125	1.125	12 x 12 x 12
12 x 12 x 10	12.750	10.750	10.00	9.50	0.250	0.250	0.330	0.307	0.562	0.500	0.844	0.719	1.000	0.844	1.125	1.000	12 x 12 x 10
12 x 12 x 8	12.750	8.625	10.00	9.00	0.250	0.250	0.330	0.277	0.562	0.406	0.844	0.594	1.000	0.719	1.125	0.812	12 x 12 x 8
12 x 12 x 6	12.750	6.625	10.00	8.62	-	-	-	-	-	-	-	-	1.000	0.562	-	-	12 x 12 x 6
12 x 12 x 5	12.750	5.563	10.00	8.50	-	-	-	-	-	-	-	-	1.000	0.500	-	-	12 x 12 x 5
14 x 14 x 14	14.000	14.000	11.00	11.00	0.312	0.312	0.375	0.375	0.594	0.594	0.938	0.938	1.094	1.094	1.250	1.250	14 x 14 x 14
14 x 14 x 12	14.000	12.750	11.00	10.62	0.312	0.250	0.375	0.330	0.594	0.562	0.938	0.844	1.094	1.000	1.250	1.125	14 x 14 x 12
14 x 14 x 10	14.000	10.750	11.00	10.12	0.312	0.250	0.375	0.307	0.594	0.500	0.938	0.719	1.094	0.844	1.250	1.000	14 x 14 x 10
14 x 14 x 8	14.000	8.625	11.00	9.75	0.312	0.250	0.375	0.277	0.594	0.406	0.938	0.594	1.094	0.719	1.250	0.812	14 x 14 x 8
14 x 14 x 6	14.000	6.625	11.00	9.38	-	-	-	-	-	-	-	-	1.094	0.562	-	-	14 x 14 x 6
16 x 16 x 16	16.000	16.000	12.00	12.00	0.312	0.312	0.375	0.375	0.656	0.656	1.031	1.031	1.219	1.129	1.438	1.438	16 x 16 x 16
16 x 16 x 14	16.000	14.000	12.00	12.00	0.312	0.312	0.375	0.375	0.656	0.594	1.031	0.938	1.219	1.094	1.438	1.250	16 x 16 x 14
16 x 16 x 12	16.000	12.750	12.00	11.62	0.312	0.250	0.375	0.330	0.656	0.562	1.031	0.844	1.219	1.000	1.438	1.125	16 x 16 x 12
16 x 16 x 10	16.000	10.750	12.00	11.12	0.312	0.250	0.375	0.307	0.656	0.500	1.031	0.719	1.219	0.844	1.438	1.000	16 x 16 x 10
16 x 16 x 8	16.000	8.625	12.00	10.75	0.312	0.250	0.375	0.277	0.656	0.406	1.031	0.594	1.219	0.718	1.438	0.812	16 x 16 x 8
16 x 16 x 6	16.000	6.625	12.00	10.38	-	-	-	-	-	-	-	-	1.219	0.562	-	-	16 x 16 x 6

WROUGHT STEEL BUTT-WELDING FITTINGS

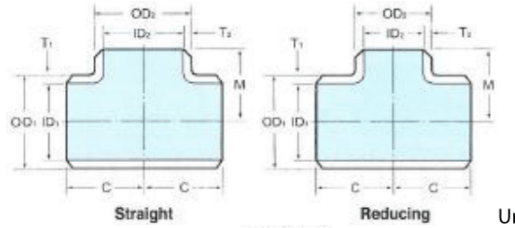
DOBEND

Straight Tee
Reducing Tee

Sch 5S, Sch 10S, Sch 20, Sch 30, Sch 60, Sch 100, Sch 120, Sch 140

Material:

ASTM A234 WPB; A403 WP304/304L; A403 WP316/316L; A403 WP310S



ASME B16.9

Unit : Inch

Nominal Pipe Size	Outside Diameter		Center to End		Sch 20		Sch 30		Sch 60		Sch 100		Sch 120		Sch 140		Nominal Pipe Size
	OD1	OD2	Run C	Outlet M	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
18 x 18 x 18	18.000	18.000	13.50	13.50	0.312	0.312	0.438	0.438	0.750	0.750	1.156	1.156	1.375	1.375	1.562	1.562	18 x 18 x 18
18 x 18 x 16	18.000	16.000	13.50	13.00	0.312	0.312	0.438	0.375	0.750	0.656	1.156	1.031	1.375	1.219	1.562	1.438	18 x 18 x 16
18 x 18 x 14	18.000	14.000	13.50	13.00	0.312	0.312	0.438	0.375	0.750	0.594	1.156	0.938	1.375	1.094	1.562	1.250	18 x 18 x 14
18 x 18 x 12	18.000	12.750	13.50	12.62	0.312	0.250	0.438	0.330	0.750	0.562	1.156	0.844	1.375	1.000	1.562	1.125	18 x 18 x 12
18 x 18 x 10	18.000	10.750	13.50	12.12	0.312	0.250	0.438	0.307	0.750	0.500	1.156	0.719	1.375	0.844	1.562	1.000	18 x 18 x 10
18 x 18 x 8	18.000	8.625	13.50	11.75	0.312	0.250	0.438	0.277	0.750	0.406	1.156	0.594	1.375	0.719	1.562	0.812	18 x 18 x 8
20 x 20 x 20	20.000	20.000	15.00	15.00	0.375	0.375	0.500	0.500	0.812	0.812	1.281	1.281	1.500	1.500	1.750	1.750	20 x 20 x 20
20 x 20 x 18	20.000	18.000	15.00	14.50	0.375	0.312	0.500	0.438	0.812	0.750	1.281	1.156	1.500	1.375	1.750	1.562	20 x 20 x 18
20 x 20 x 16	20.000	16.000	15.00	14.00	0.375	0.312	0.500	0.375	0.812	0.656	1.281	1.031	1.500	1.219	1.750	1.438	20 x 20 x 16
20 x 20 x 14	20.000	14.000	15.00	14.00	0.375	0.312	0.500	0.375	0.812	0.594	1.281	0.938	1.500	1.094	1.750	1.250	20 x 20 x 14
20 x 20 x 12	20.000	12.750	15.00	13.62	0.375	0.250	0.500	0.330	0.812	0.562	1.281	0.844	1.500	1.000	1.750	1.125	20 x 20 x 12
20 x 20 x 10	20.000	10.750	15.00	13.12	0.375	0.250	0.500	0.307	0.812	0.500	1.281	0.719	1.500	0.844	1.750	1.000	20 x 20 x 10
20 x 20 x 8	20.000	8.625	15.00	12.75	0.375	0.250	0.500	0.277	0.812	0.406	1.281	0.594	1.500	0.719	1.750	0.812	20 x 20 x 8
22 x 22 x 22	22.000	22.000	16.50	16.50	0.375	0.375	0.500	0.500	0.875	0.875	1.375	1.375	1.625	1.625	1.875	1.875	22 x 22 x 22
22 x 22 x 20	22.000	20.000	16.50	16.00	0.375	0.375	0.500	0.500	0.875	0.812	1.375	1.281	1.625	1.500	1.875	1.750	22 x 22 x 20
22 x 22 x 18	22.000	18.000	16.50	15.50	0.375	0.312	0.500	0.438	0.875	0.750	1.375	1.156	1.625	1.375	1.875	1.562	22 x 22 x 18
22 x 22 x 16	22.000	16.000	16.50	15.00	0.375	0.312	0.500	0.375	0.875	0.656	1.375	1.031	1.625	1.219	1.875	1.438	22 x 22 x 16
22 x 22 x 14	22.000	14.000	16.50	15.00	0.375	0.312	0.500	0.375	0.875	0.594	1.375	0.938	1.625	1.094	1.875	1.250	22 x 22 x 14
22 x 22 x 12	22.000	12.750	16.50	14.62	0.375	0.250	0.500	0.330	0.875	0.562	1.375	0.844	1.625	1.000	1.875	1.125	22 x 22 x 12
22 x 22 x 10	22.000	10.750	16.50	14.12	0.375	0.250	0.500	0.307	0.875	0.500	1.375	0.719	1.625	0.844	1.875	1.000	22 x 22 x 10
24 x 24 x 24	24.000	24.000	17.00	17.00	0.375	0.375	0.562	0.562	0.969	0.969	1.531	1.531	1.812	1.812	2.062	2.062	24 x 24 x 24
24 x 24 x 22	24.000	22.000	17.00	17.00	0.375	0.375	0.562	0.500	0.969	0.875	1.531	1.375	1.812	1.625	2.062	1.875	24 x 24 x 22
24 x 24 x 20	24.000	20.000	17.00	17.00	0.375	0.375	0.562	0.500	0.969	0.812	1.531	1.281	1.812	1.500	2.062	1.750	24 x 24 x 20
24 x 24 x 18	24.000	18.000	17.00	16.50	0.375	0.312	0.562	0.438	0.969	0.750	1.531	1.156	1.812	1.375	2.062	1.562	24 x 24 x 18
24 x 24 x 16	24.000	16.000	17.00	16.00	0.375	0.312	0.562	0.375	0.969	0.656	1.531	1.031	1.812	1.219	2.062	1.438	24 x 24 x 16
24 x 24 x 14	24.000	14.000	17.00	16.00	0.375	0.312	0.562	0.375	0.969	0.594	1.531	0.938	1.812	1.094	2.062	1.250	24 x 24 x 14
24 x 24 x 12	24.000	12.750	17.00	15.62	0.375	0.250	0.562	0.330	0.969	0.562	1.531	0.844	1.812	1.000	2.062	1.125	24 x 24 x 12
24 x 24 x 10	24.000	10.750	17.00	15.12	0.375	0.250	0.562	0.307	0.969	0.500	1.531	0.719	1.812	0.844	2.062	1.000	24 x 24 x 10
26 x 26 x 26	26.000	26.000	19.50	19.50	0.500	0.500	-	-	-	-	-	-	-	-	-	-	26 x 26 x 26
26 x 26 x 24	26.000	24.000	19.50	19.00	0.500	0.375	-	-	-	-	-	-	-	-	-	-	26 x 26 x 24
26 x 26 x 22	26.000	22.000	19.50	18.50	0.500	0.375	-	-	-	-	-	-	-	-	-	-	26 x 26 x 22
26 x 26 x 20	26.000	20.000	19.50	18.00	0.500	0.375	-	-	-	-	-	-	-	-	-	-	26 x 26 x 20
26 x 26 x 18	26.000	18.000	19.50	17.50	0.500	0.312	-	-	-	-	-	-	-	-	-	-	26 x 26 x 18
26 x 26 x 16	26.000	16.000	19.50	17.00	0.500	0.312	-	-	-	-	-	-	-	-	-	-	26 x 26 x 16
26 x 26 x 14	26.000	14.000	19.50	17.00	0.500	0.312	-	-	-	-	-	-	-	-	-	-	26 x 26 x 14
26 x 26 x 12	26.000	12.750	19.50	16.62	0.500	0.250	-	-	-	-	-	-	-	-	-	-	26 x 26 x 12

WROUGHT STEEL BUTT-WELDING FITTINGS

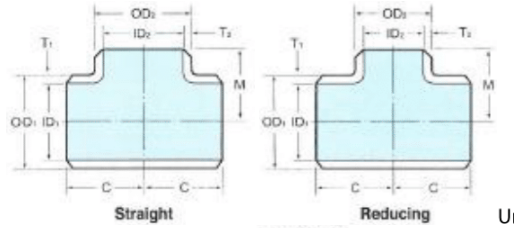
DOBEND

Straight Tee
Reducing Tee

Sch 5S, Sch 10S, Sch 20, Sch 30, Sch 60, Sch 100, Sch 120, Sch 140

Material:

ASTM A234 WPB; A403 WP304/304L; A403 WP316/316L; A403 WP310S



ASME B16.9

Unit : Inch

Nominal Pipe Size	Outside Diameter		Center to End		Sch 20		Sch 30		Sch 60		Sch 100		Sch 120		Sch 140		Nominal Pipe Size
	OD1	OD2	Run C	Outlet M	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
18 x 18 x 18	18.000	18.000	13.50	13.50	0.312	0.312	0.438	0.438	0.750	0.750	1.156	1.156	1.375	1.375	1.562	1.562	18 x 18 x 18
18 x 18 x 16	18.000	16.000	13.50	13.00	0.312	0.312	0.438	0.375	0.750	0.656	1.156	1.031	1.375	1.219	1.562	1.438	18 x 18 x 16
18 x 18 x 14	18.000	14.000	13.50	13.00	0.312	0.312	0.438	0.375	0.750	0.594	1.156	0.938	1.375	1.094	1.562	1.250	18 x 18 x 14
18 x 18 x 12	18.000	12.750	13.50	12.62	0.312	0.250	0.438	0.330	0.750	0.562	1.156	0.844	1.375	1.000	1.562	1.125	18 x 18 x 12
18 x 18 x 10	18.000	10.750	13.50	12.12	0.312	0.250	0.438	0.307	0.750	0.500	1.156	0.719	1.375	0.844	1.562	1.000	18 x 18 x 10
18 x 18 x 8	18.000	8.625	13.50	11.75	0.312	0.250	0.438	0.277	0.750	0.406	1.156	0.594	1.375	0.719	1.562	0.812	18 x 18 x 8
20 x 20 x 20	20.000	20.000	15.00	15.00	0.375	0.375	0.500	0.500	0.812	0.812	1.281	1.281	1.500	1.500	1.750	1.750	20 x 20 x 20
20 x 20 x 18	20.000	18.000	15.00	14.50	0.375	0.312	0.500	0.438	0.812	0.750	1.281	1.156	1.500	1.375	1.750	1.562	20 x 20 x 18
20 x 20 x 16	20.000	16.000	15.00	14.00	0.375	0.312	0.500	0.375	0.812	0.656	1.281	1.031	1.500	1.219	1.750	1.438	20 x 20 x 16
20 x 20 x 14	20.000	14.000	15.00	14.00	0.375	0.312	0.500	0.375	0.812	0.594	1.281	0.938	1.500	1.094	1.750	1.250	20 x 20 x 14
20 x 20 x 12	20.000	12.750	15.00	13.62	0.375	0.250	0.500	0.330	0.812	0.562	1.281	0.844	1.500	1.000	1.750	1.125	20 x 20 x 12
20 x 20 x 10	20.000	10.750	15.00	13.12	0.375	0.250	0.500	0.307	0.812	0.500	1.281	0.719	1.500	0.844	1.750	1.000	20 x 20 x 10
20 x 20 x 8	20.000	8.625	15.00	12.75	0.375	0.250	0.500	0.277	0.812	0.406	1.281	0.594	1.500	0.719	1.750	0.812	20 x 20 x 8
22 x 22 x 22	22.000	22.000	16.50	16.50	0.375	0.375	0.500	0.500	0.875	0.875	1.375	1.375	1.625	1.625	1.875	1.875	22 x 22 x 22
22 x 22 x 20	22.000	20.000	16.50	16.00	0.375	0.375	0.500	0.500	0.875	0.812	1.375	1.281	1.625	1.500	1.875	1.750	22 x 22 x 20
22 x 22 x 18	22.000	18.000	16.50	15.50	0.375	0.312	0.500	0.438	0.875	0.750	1.375	1.156	1.625	1.375	1.875	1.562	22 x 22 x 18
22 x 22 x 16	22.000	16.000	16.50	15.00	0.375	0.312	0.500	0.375	0.875	0.656	1.375	1.031	1.625	1.219	1.875	1.438	22 x 22 x 16
22 x 22 x 14	22.000	14.000	16.50	15.00	0.375	0.312	0.500	0.375	0.875	0.594	1.375	0.938	1.625	1.094	1.875	1.250	22 x 22 x 14
22 x 22 x 12	22.000	12.750	16.50	14.62	0.375	0.250	0.500	0.330	0.875	0.562	1.375	0.844	1.625	1.000	1.875	1.125	22 x 22 x 12
22 x 22 x 10	22.000	10.750	16.50	14.12	0.375	0.250	0.500	0.307	0.875	0.500	1.375	0.719	1.625	0.844	1.875	1.000	22 x 22 x 10
24 x 24 x 24	24.000	24.000	17.00	17.00	0.375	0.375	0.562	0.562	0.969	0.969	1.531	1.531	1.812	1.812	2.062	2.062	24 x 24 x 24
24 x 24 x 22	24.000	22.000	17.00	17.00	0.375	0.375	0.562	0.500	0.969	0.875	1.531	1.375	1.812	1.625	2.062	1.875	24 x 24 x 22
24 x 24 x 20	24.000	20.000	17.00	17.00	0.375	0.375	0.562	0.500	0.969	0.812	1.531	1.281	1.812	1.500	2.062	1.750	24 x 24 x 20
24 x 24 x 18	24.000	18.000	17.00	16.50	0.375	0.312	0.562	0.438	0.969	0.750	1.531	1.156	1.812	1.375	2.062	1.562	24 x 24 x 18
24 x 24 x 16	24.000	16.000	17.00	16.00	0.375	0.312	0.562	0.375	0.969	0.656	1.531	1.031	1.812	1.219	2.062	1.438	24 x 24 x 16
24 x 24 x 14	24.000	14.000	17.00	16.00	0.375	0.312	0.562	0.375	0.969	0.594	1.531	0.938	1.812	1.094	2.062	1.250	24 x 24 x 14
24 x 24 x 12	24.000	12.750	17.00	15.62	0.375	0.250	0.562	0.330	0.969	0.562	1.531	0.844	1.812	1.000	2.062	1.125	24 x 24 x 12
24 x 24 x 10	24.000	10.750	17.00	15.12	0.375	0.250	0.562	0.307	0.969	0.500	1.531	0.719	1.812	0.844	2.062	1.000	24 x 24 x 10
26 x 26 x 26	26.000	26.000	19.50	19.50	0.500	0.500	-	-	-	-	-	-	-	-	-	-	26 x 26 x 26
26 x 26 x 24	26.000	24.000	19.50	19.00	0.500	0.375	-	-	-	-	-	-	-	-	-	-	26 x 26 x 24
26 x 26 x 22	26.000	22.000	19.50	18.50	0.500	0.375	-	-	-	-	-	-	-	-	-	-	26 x 26 x 22
26 x 26 x 20	26.000	20.000	19.50	18.00	0.500	0.375	-	-	-	-	-	-	-	-	-	-	26 x 26 x 20
26 x 26 x 18	26.000	18.000	19.50	17.50	0.500	0.312	-	-	-	-	-	-	-	-	-	-	26 x 26 x 18
26 x 26 x 16	26.000	16.000	19.50	17.00	0.500	0.312	-	-	-	-	-	-	-	-	-	-	26 x 26 x 16
26 x 26 x 14	26.000	14.000	19.50	17.00	0.500	0.312	-	-	-	-	-	-	-	-	-	-	26 x 26 x 14
26 x 26 x 12	26.000	12.750	19.50	16.62	0.500	0.250	-	-	-	-	-	-	-	-	-	-	26 x 26 x 12

WROUGHT STEEL BUTT-WELDING FITTINGS

DOBEND

Straight Tee
Reducing Tee

Sch 5S, Sch 10S, Sch 20, Sch 30

Material:

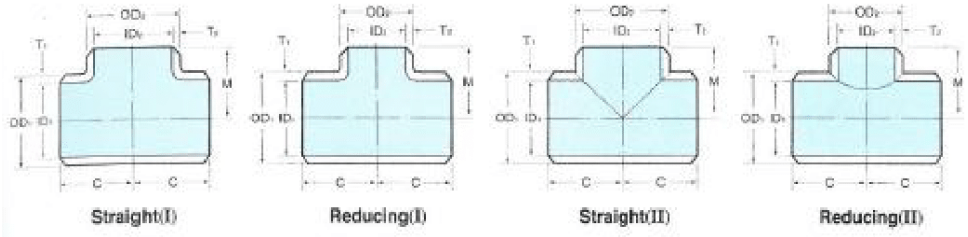
ASTM A234 WPB; A403 WP304/304L; A403 WP316/316L; A403 WP310S

ASME B16.9

Unit : Inch

Nominal Pipe Size	Outside Diameter		Center to End		Sch 20		Sch 30	
	OD1	OD2	Run C	Outlet M	T	ID	T	ID
28 x 28 x 28	28.000	28.000	20.50	20.50	0.500	0.500	0.625	0.652
28 x 28 x 26	28.000	26.000	20.50	20.50	0.500	0.500	-	-
28 x 28 x 24	28.000	24.000	20.50	20.00	0.500	0.375	0.625	0.562
28 x 28 x 22	28.000	22.000	20.50	19.50	0.500	0.375	0.625	0.500
28 x 28 x 20	28.000	20.000	20.50	19.00	0.500	0.375	0.625	0.500
28 x 28 x 18	28.000	18.000	20.50	18.50	0.500	0.312	0.625	0.438
28 x 28 x 16	28.000	16.000	20.50	18.00	0.500	0.312	0.625	0.375
28 x 28 x 14	28.000	14.000	20.50	18.00	0.500	0.312	0.625	0.375
28 x 28 x 12	28.000	12.750	20.50	17.62	0.500	0.250	0.625	0.330
30 x 30 x 30	30.000	30.000	22.00	22.00	0.500	0.500	0.625	0.625
30 x 30 x 28	30.000	28.000	22.00	21.50	0.500	0.500	0.625	0.625
30 x 30 x 26	30.000	26.000	22.00	21.50	0.500	0.500	-	-
30 x 30 x 24	30.000	24.000	22.00	21.00	0.500	0.375	0.625	0.562
30 x 30 x 22	30.000	22.000	22.00	20.50	0.500	0.375	0.625	0.500
30 x 30 x 20	30.000	20.000	22.00	20.00	0.500	0.375	0.625	0.500
30 x 30 x 18	30.000	18.000	22.00	19.50	0.500	0.312	0.625	0.438
30 x 30 x 16	30.000	16.000	22.00	19.00	0.500	0.312	0.625	0.375
30 x 30 x 14	30.000	14.000	22.00	19.00	0.500	0.312	0.625	0.375
30 x 30 x 12	30.000	12.750	22.00	18.62	0.500	0.250	0.625	0.330
30 x 30 x 10	30.000	10.750	22.00	18.12	0.500	0.250	0.625	0.307
32 x 32 x 32	32.000	32.000	23.50	23.50	0.500	0.500	0.625	0.625
32 x 32 x 30	32.000	30.000	23.50	23.00	0.500	0.500	0.625	0.625
32 x 32 x 28	32.000	28.000	23.50	22.50	0.500	0.500	0.625	0.625
32 x 32 x 26	32.000	26.000	23.50	22.50	0.500	0.500	-	-
32 x 32 x 24	32.000	24.000	23.50	22.00	0.500	0.375	0.625	0.562
32 x 32 x 22	32.000	22.000	23.50	21.50	0.500	0.375	0.625	0.500
32 x 32 x 20	32.000	20.000	23.50	21.00	0.500	0.375	0.625	0.500
32 x 32 x 18	32.000	18.000	23.50	20.50	0.500	0.312	0.625	0.438
32 x 32 x 16	32.000	16.000	23.50	20.00	0.500	0.312	0.625	0.375
32 x 32 x 14	32.000	14.000	23.50	20.00	0.500	0.312	0.625	0.375

Nominal Pipe Size	Outside Diameter		Center to End		Sch 20		Sch 30	
	OD1	OD2	Run C	Outlet M	T	ID	T	ID
34 x 34 x 34	34.000	34.000	25.00	25.00	0.500	0.500	0.625	0.625
34 x 34 x 32	34.000	32.000	25.00	24.50	0.500	0.500	0.625	0.625
34 x 34 x 30	34.000	30.000	25.00	24.00	0.500	0.500	0.625	0.625
34 x 34 x 28	34.000	28.000	25.00	23.50	0.500	0.500	0.625	0.625
34 x 34 x 26	34.000	26.000	25.00	23.50	0.500	0.500	-	-
34 x 34 x 24	34.000	24.000	25.00	23.00	0.500	0.375	0.625	0.562
34 x 34 x 22	34.000	22.000	25.00	22.50	0.500	0.375	0.625	0.500
34 x 34 x 20	34.000	20.000	25.00	22.00	0.500	0.375	0.625	0.500
34 x 34 x 18	34.000	18.000	25.00	21.50	0.500	0.312	0.625	0.438
34 x 34 x 16	34.000	16.000	25.00	21.50	0.500	0.312	0.625	0.375
36 x 36 x 36	36.000	36.000	26.50	26.50	0.500	0.500	0.625	0.625
36 x 36 x 34	36.000	34.000	26.50	26.00	0.500	0.500	0.625	0.625
36 x 36 x 32	36.000	32.000	26.50	25.50	0.500	0.500	0.625	0.625
36 x 36 x 30	36.000	30.000	26.50	25.00	0.500	0.500	0.625	0.625
36 x 36 x 28	36.000	28.000	26.50	24.50	0.500	0.500	0.625	0.625
36 x 36 x 26	36.000	26.000	26.50	24.50	0.500	0.500	-	-
36 x 36 x 24	36.000	24.000	26.50	24.00	0.500	0.375	0.625	0.562
36 x 36 x 22	36.000	22.000	26.50	23.50	0.500	0.375	0.625	0.500
36 x 36 x 20	36.000	20.000	26.50	23.00	0.500	0.375	0.625	0.500
36 x 36 x 18	36.000	18.000	26.50	22.50	0.500	0.312	0.625	0.438
36 x 36 x 16	36.000	16.000	26.50	22.00	0.500	0.312	0.625	0.375



WROUGHT STEEL BUTT-WELDING FITTINGS

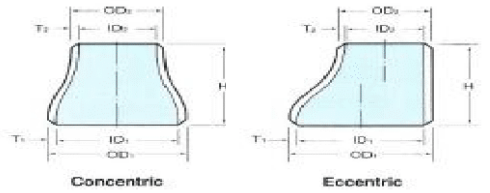
DOBEND

Reducer

Sch 5S, Sch 10S, STD, Sch40, XS, Sch 80, Sch 160, XXS

Material:

ASTM A234 WPB; A403 WP304/304L; A403 WP316/316L; A403 WP310S



ASME B16.9

Unit : Inch

Nominal Pipe Size	Outside Diameter		End to End	STD		Sch 40		XS		Sch 80		Sch 160		XXS		Nominal Pipe Size
	OD1	OD2	H	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
3/4 x 1/2	1.050	0.840	1.50	0.113	0.109	0.113	0.109	0.154	0.147	0.154	0.147	0.219	0.188	0.308	0.294	3/4 x 1/2
3/4 x 3/8	1.050	0.675	1.50	0.113	0.091	0.113	0.091	0.154	0.126	0.154	0.126	0.219	-	-	-	3/4 x 3/8
1 x 3/4	1.315	1.050	2.00	0.133	0.113	0.133	0.113	0.179	0.154	0.179	0.154	0.250	0.219	0.358	0.308	1 x 3/4
1 x 1/2	1.315	0.840	2.00	0.133	0.109	0.133	0.109	0.179	0.147	0.179	0.147	0.250	0.219	0.358	0.294	1 x 1/2
1.1/4 x 1	1.660	0.315	2.00	0.140	0.133	0.140	0.133	0.191	0.179	0.191	0.179	0.250	0.250	0.382	0.358	1.1/4 x 1
1.1/4 x 3/4	1.660	1.050	2.00	0.140	0.113	0.140	0.113	0.191	0.154	0.191	0.154	0.250	0.219	0.382	0.308	1.1/4 x 3/4
1.1/4 x 1/2	1.660	0.840	2.00	0.140	0.109	0.140	0.109	0.191	0.147	0.191	0.147	0.250	0.188	0.382	0.294	1.1/4 x 1/2
1.1/2 x 1.1/4	1.900	1.660	2.50	0.145	0.140	0.145	0.140	0.200	0.191	0.200	0.191	0.281	0.250	0.400	0.382	1.1/2 x 1.1/4
1.1/2 x 1	1.900	1.315	2.50	0.145	0.133	0.145	0.133	0.200	0.179	0.200	0.179	0.281	0.250	0.400	0.358	1.1/2 x 1.1/4
1.1/2 x 3/4	1.900	1.050	2.50	0.145	0.113	0.145	0.113	0.200	0.154	0.200	0.154	0.281	0.219	0.400	0.308	1.1/2 x 3/4
1.1/2 x 1/2	1.900	0.840	2.50	0.145	0.109	0.145	0.109	0.200	0.147	0.200	0.147	0.281	0.188	0.400	0.294	1.1/2 x 1/2
2 x 1.1/2	2.375	1.900	3.00	0.154	0.145	0.154	0.145	0.218	0.200	0.218	0.200	0.344	0.281	0.436	0.400	2 x 1.1/2
2 x 1.1/4	2.375	1.660	3.00	0.154	0.140	0.154	0.140	0.218	0.191	0.218	0.191	0.344	0.250	0.436	0.382	2 x 1.1/4
2 x 1	2.375	1.315	3.00	0.154	0.133	0.154	0.133	0.218	0.179	0.218	0.179	0.344	0.250	0.436	0.358	2 x 1
2 x 3/4	2.375	1.050	3.00	0.154	0.113	0.154	0.113	0.218	0.154	0.218	0.154	0.344	0.220	0.436	0.308	2 x 3/4
2.1/2 x 2	2.875	2.375	3.50	0.203	0.154	0.203	0.154	0.276	0.218	0.276	0.218	0.375	0.344	0.552	0.436	2.1/2 x 2
2.1/2 x 1.1/2	2.875	1.900	3.50	0.203	0.145	0.203	0.145	0.276	0.200	0.276	0.200	0.375	0.281	0.552	0.400	2.1/2 x 1.1/2
2.1/2 x 1.1/4	2.875	1.660	3.50	0.203	0.140	0.203	0.140	0.276	0.191	0.276	0.191	0.375	0.250	0.552	0.382	2.1/2 x 1.1/4
2.1/2 x 1	2.875	1.315	3.50	0.203	0.133	0.203	0.133	0.276	0.179	0.276	0.179	0.375	0.250	0.552	0.358	2.1/2 x 1
3 x 2.1/2	3.500	2.875	3.50	0.216	0.203	0.216	0.203	0.300	0.276	0.300	0.276	0.438	0.375	0.600	0.552	3 x 2.1/2
3 x 2	3.500	2.375	3.50	0.216	0.154	0.216	0.154	0.300	0.218	0.300	0.218	0.438	0.344	0.600	0.436	3 x 2
3 x 1.1/2	3.500	1.900	3.50	0.216	0.145	0.216	0.145	0.300	0.200	0.300	0.200	0.438	0.281	0.600	0.400	3 x 1.1/2
3 x 1.1/4	3.500	1.660	3.50	0.216	0.140	0.216	0.140	0.300	0.191	0.300	0.191	0.438	0.250	0.600	0.382	3 x 1.1/4
3.1/2 x 3	4.000	3.500	4.00	0.226	0.216	0.226	0.216	0.318	0.300	0.318	0.300	-	-	-	-	3.1/2 x 3
3.1/2 x 2.1/2	4.000	2.875	4.00	0.226	0.203	0.226	0.203	0.318	0.276	0.318	0.276	-	-	-	-	3.1/2 x 2.1/2
3.1/2 x 2	4.000	2.375	4.00	0.226	0.154	0.226	0.154	0.318	0.218	0.318	0.218	-	-	-	-	3.1/2 x 2
3.1/2 x 1.1/2	4.000	1.900	4.00	0.226	0.145	0.226	0.145	0.318	0.200	0.318	0.200	-	-	-	-	3.1/2 x 1.1/2
3.1/2 x 1.1/4	4.000	1.660	4.00	0.226	0.140	0.226	0.140	0.318	0.191	0.318	0.191	-	-	-	-	3.1/2 x 1.1/4
4 x 3.1/2	4.500	4.000	4.00	0.237	0.226	0.237	0.226	0.337	0.318	0.337	0.318	-	-	-	-	4 x 3.1/2
4 x 3	4.500	3.500	4.00	0.237	0.216	0.237	0.216	0.337	0.300	0.337	0.300	0.531	0.438	0.600	0.674	4 x 3
4 x 2.1/2	4.500	2.875	4.00	0.237	0.203	0.237	0.203	0.337	0.276	0.337	0.276	0.531	0.375	0.552	0.674	4 x 2.1/2
4 x 2	4.500	2.375	4.00	0.237	0.154	0.237	0.154	0.337	0.218	0.337	0.218	0.531	0.344	0.436	0.674	4 x 2
4 x 1.1/2	4.500	1.900	4.00	0.237	0.145	0.237	0.145	0.337	0.200	0.337	0.200	0.531	0.281	0.400	0.674	4 x 1.1/2

WROUGHT STEEL BUTT-WELDING FITTINGS

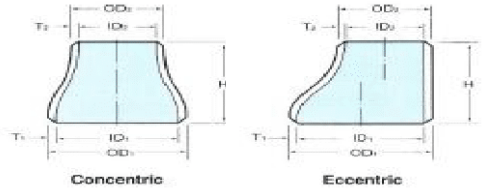
DOBEND

Reducer

Sch 5S, Sch 10S, STD, Sch40, XS, Sch 80, Sch 160, XXS

Material:

ASTM A234 WPB; A403 WP304/304L; A403 WP316/316L; A403 WP310S



ASME B16.9

Unit : Inch

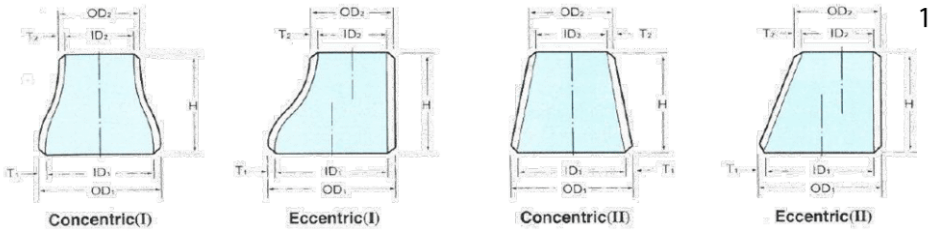
Nominal Pipe Size	Outside Diameter		End to End	STD		Sch 40		XS		Sch 80		Sch 160		XXS		Nominal Pipe Size
	OD1	OD2	H	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
5 x 4	5.563	4.500	5.00	0.258	0.237	0.258	0.237	0.375	0.337	0.375	0.337	0.625	0.531	0.750	0.674	5 x 4
5 x 3.1/2	5.563	4.000	5.30	0.258	0.226	0.258	0.226	0.375	0.318	0.375	0.318	-	-	-	-	5 x 3.1/2
5 x 3	5.563	3.500	53.00	0.258	0.216	0.258	0.216	0.375	0.300	0.375	0.300	0.625	0.438	0.750	0.600	5 x 3
5 x 2.1/2	5.563	2.875	53.00	0.258	0.203	0.258	0.203	0.375	0.276	0.375	0.276	0.625	0.375	0.750	0.552	5 x 2.1/2
5 x 2	5.563	2.375	5.00	0.258	0.154	0.258	0.154	0.375	0.218	0.375	0.218	0.625	0.344	0.750	0.436	5 x 2
6 x 5	6.625	5.563	5.50	0.280	0.258	0.280	0.258	0.432	0.375	0.432	0.375	0.719	0.625	0.864	0.750	6 x 5
6 x 4	6.625	4.500	5.50	0.280	0.237	0.280	0.237	0.432	0.337	0.432	0.337	0.719	0.531	0.864	0.674	6 x 4
6 x 3.1/2	6.625	4.000	5.50	0.280	0.226	0.280	0.226	0.432	0.318	0.432	0.318	-	-	-	-	6 x 3.1/2
6 x 3	6.625	3.500	5.50	0.280	0.216	0.280	0.216	0.432	0.300	0.432	0.300	0.719	0.438	0.864	0.600	6 x 3
6 x 2.1/2	6.625	2.875	5.50	0.280	0.203	0.280	0.203	0.432	0.276	0.432	0.276	0.719	0.375	0.864	0.552	6 x 2.1/2
8 x 6	8.625	6.625	6.00	0.322	0.280	0.322	0.280	0.500	0.432	0.500	0.432	0.906	0.719	0.875	0.864	8 x 6
8 x 5	8.625	5.563	6.00	0.322	0.258	0.322	0.258	0.500	0.375	0.500	0.375	0.906	0.625	0.875	0.750	8 x 5
8 x 4	8.625	4.500	6.00	0.322	0.237	0.322	0.237	0.500	0.337	0.500	0.337	0.906	0.531	0.875	0.674	8 x 4
8 x 3.1/2	8.625	4.000	6.00	0.322	0.226	0.322	0.226	0.500	0.318	0.500	0.318	-	-	-	-	8 x 3.1/2
10 x 8	10.750	8.625	7.00	0.365	0.322	0.365	0.322	0.500	0.500	0.594	0.500	1.125	0.906	1.000	0.875	10 x 8
10 x 6	10.750	6.625	7.00	0.365	0.280	0.365	0.280	0.500	0.432	0.594	0.432	1.125	0.719	1.000	0.864	10 x 6
10 x 5	10.750	5.563	7.00	0.365	0.258	0.365	0.258	0.500	0.375	0.594	0.375	1.125	0.625	1.000	0.750	10 x 5
10 x 4	10.750	4.500	7.00	0.365	0.237	0.365	0.237	0.500	0.337	0.594	0.337	1.125	0.531	1.000	0.674	10 x 4
12 x 10	12.750	10.750	8.00	0.375	0.365	0.406	0.365	0.500	0.500	0.688	0.594	1.312	1.125	1.000	1.000	12 x 10
12 x 8	12.750	8.625	8.00	0.375	0.322	0.406	0.322	0.500	0.500	0.688	0.500	1.312	0.906	1.000	0.875	12 x 8
12 x 6	12.750	6.625	8.00	0.375	0.280	0.406	0.280	0.500	0.432	0.688	0.432	1.312	0.719	1.000	0.864	12 x 6
12 x 5	12.750	5.563	8.00	0.375	0.258	0.406	0.258	0.500	0.375	0.688	0.375	1.312	0.625	1.000	0.750	12 x 5
14 x 12	14.000	12.750	13.00	0.375	0.375	0.438	0.406	0.500	0.500	0.750	0.688	1.406	1.312	-	-	14 x 12
14 x 10	14.000	10.750	13.00	0.375	0.365	0.438	0.365	0.500	0.500	0.750	0.594	1.046	1.125	-	-	14 x 10
14 x 8	14.000	8.625	13.00	0.375	0.322	0.438	0.322	0.500	0.500	0.750	0.500	1.406	0.906	-	-	14 x 8
14 x 6	14.000	6.625	13.00	0.375	0.280	0.438	0.280	0.500	0.432	0.750	0.432	1.046	0.719	-	-	14 x 6

WROUGHT STEEL BUTT-WELDING FITTINGS

DOBEND

Reducer

Sch 5S, Sch 10S, STD,
Sch40, XS, Sch 80, Sch 160



ASME B16.9

Nominal Pipe Size	Outside Diameter		End to End	STD		Sch 40		XS		Sch 80		Sch 160		Nominal Pipe Size
	OD1	OD2	H	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
16 x 14	16.000	14.000	14.00	0.375	0.375	0.500	0.438	0.500	0.500	0.844	0.750	1.594	1.406	16 x 14
16 x 12	16.000	12.750	14.00	0.375	0.375	0.500	0.406	0.500	0.500	0.844	0.688	1.594	1.312	16 x 12
16 x 10	16.000	10.750	14.00	0.375	0.375	0.500	0.365	0.500	0.500	0.844	0.594	1.594	1.125	16 x 10
16 x 8	16.000	8.625	14.00	0.375	0.375	0.500	0.322	0.500	0.500	0.844	0.500	1.594	0.906	16 x 8
18 x 16	18.000	16.000	15.00	0.375	0.375	0.562	0.500	0.500	0.500	0.938	0.844	1.781	1.594	18 x 16
18 x 14	18.000	14.000	15.00	0.375	0.375	0.562	0.438	0.500	0.500	0.938	0.750	1.781	1.406	18 x 14
18 x 12	18.000	12.750	15.00	0.375	0.375	0.562	0.406	0.500	0.500	0.938	0.688	1.781	1.312	18 x 12
18 x 10	18.000	10.750	15.00	0.375	0.375	0.562	0.365	0.500	0.500	0.938	0.594	1.781	1.125	18 x 10
20 x 18	20.000	18.000	20.00	0.375	0.375	0.594	0.526	0.500	0.500	1.031	0.938	1.969	1.781	20 x 18
20 x 16	20.000	16.000	20.00	0.375	0.375	0.594	0.500	0.500	0.500	1.031	0.844	1.969	1.594	20 x 16
20 x 14	20.000	14.000	20.00	0.375	0.375	0.594	0.438	0.500	0.500	1.031	0.750	1.969	1.406	20 x 14
20 x 12	20.000	12.750	20.00	0.375	0.375	0.594	0.406	0.500	0.500	1.031	0.688	1.969	1.312	20 x 12
22 x 20	22.000	20.000	20.00	0.375	0.375	0.594	0.594	0.500	0.500	1.125	1.031	2.125	1.969	22 x 20
22 x 18	22.000	18.000	20.00	0.375	0.375	0.594	0.562	0.500	0.500	1.125	0.938	2.125	1.781	22 x 18
22 x 16	22.000	16.000	20.00	0.375	0.375	0.594	0.500	0.500	0.500	1.125	0.844	2.125	1.594	22 x 16
22 x 14	22.000	14.000	20.00	0.375	0.375	0.594	0.438	0.500	0.500	1.125	0.750	2.125	1.406	22 x 14
24 x 22	24.000	22.000	20.00	0.375	0.375	0.688	0.594	0.500	0.500	1.219	1.125	2.344	2.125	24 x 22
24 x 20	24.000	20.000	20.00	0.375	0.375	0.688	0.594	0.500	0.500	1.219	1.031	2.344	1.969	24 x 20
24 x 18	24.000	18.000	20.00	0.375	0.375	0.688	0.562	0.500	0.500	1.219	0.938	2.344	1.781	24 x 18
24 x 16	24.000	16.000	20.00	0.375	0.375	0.688	0.500	0.500	0.500	1.219	0.844	2.344	1.594	24 x 16
26 x 24	26.000	24.000	24.00	0.375	0.375	0.688	0.688	0.500	0.500	-	-	-	-	26 x 24
26 x 22	26.000	22.000	24.00	0.375	0.375	0.688	0.594	0.500	0.500	-	-	-	-	26 x 22
26 x 20	26.000	20.000	24.00	0.375	0.375	0.688	0.594	0.500	0.500	-	-	-	-	26 x 20
26 x 18	26.000	18.000	24.00	0.375	0.375	0.688	0.562	0.500	0.500	-	-	-	-	26 x 18
28 x 26	28.000	26.000	24.00	0.375	0.375	0.688	0.688	0.500	0.500	-	-	-	-	28 x 26
28 x 24	28.000	24.000	24.00	0.375	0.375	0.688	0.688	0.500	0.500	-	-	-	-	28 x 24
28 x 20	28.000	20.000	24.00	0.375	0.375	0.688	0.594	0.500	0.500	-	-	-	-	28 x 20
28 x 18	28.000	18.000	24.00	0.375	0.375	0.688	0.562	0.500	0.500	-	-	-	-	28 x 18

Material: ASTM A234 WPB; A403 WP304/304L; A403 WP316/316L; A403 WP310S

WROUGHT STEEL BUTT-WELDING FITTINGS

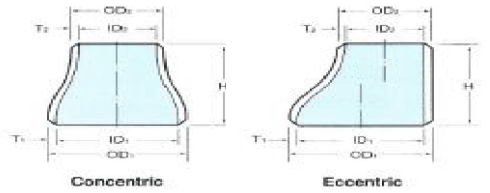
DOBEND

Reducer

Sch 5S, Sch 10S, STD, Sch40, XS

Material:

ASTM A234 WPB; A403 WP304/304L; A403 WP316/316L; A403 WP310S



ASME B16.9

Unit : Inch

Nominal Pipe Size	Outside Diameter		End to End	STD		Sch 40		XS	
	OD1	OD2	H	T1	T2	T1	T2	T1	T2
30 x 28	30.000	28.000	24.00	0.375	0.375	0.688	0.688	0.500	0.500
30 x 26	30.000	26.000	24.00	0.375	0.375	0.688	0.688	0.500	0.500
30 x 24	30.000	24.000	24.00	0.375	0.375	0.688	0.688	0.500	0.500
30 x 20	30.000	20.000	24.00	0.375	0.375	0.688	0.594	0.500	0.500
32 x 30	32.000	30.000	24.00	0.375	0.375	0.688	0.688	0.500	0.500
32 x 28	32.000	28.000	24.00	0.375	0.375	0.688	0.688	0.500	0.500
32 x 26	32.000	26.000	24.00	0.375	0.375	0.688	0.688	0.500	0.500
32 x 24	32.000	24.000	24.00	0.375	0.375	0.688	0.688	0.500	0.500
34 x 32	34.000	32.000	24.00	0.375	0.375	0.688	0.688	0.500	0.500
34 x 30	34.000	30.000	24.00	0.375	0.375	0.688	0.688	0.500	0.500
34 x 26	34.000	26.000	24.00	0.375	0.375	0.688	0.688	0.500	0.500
34 x 24	34.000	24.000	24.00	0.375	0.375	0.688	0.688	0.500	0.500
36 x 34	36.000	34.000	24.00	0.375	0.375	0.750	0.688	0.500	0.500
36 x 32	36.000	32.000	24.00	0.375	0.375	0.750	0.688	0.500	0.500
36 x 30	36.000	30.000	24.00	0.375	0.375	0.750	0.688	0.500	0.500
36 x 26	36.000	26.000	24.00	0.375	0.375	0.750	0.688	0.500	0.500
36 x 24	36.000	24.000	24.00	0.375	0.375	0.750	0.688	0.500	0.500
38 x 36	38.000	36.000	24.00	0.375	0.375	-	-	0.500	0.500
38 x 34	38.000	34.000	24.00	0.375	0.375	-	-	0.500	0.500
38 x 32	38.000	32.000	24.00	0.375	0.375	-	-	0.500	0.500
38 x 30	38.000	30.000	24.00	0.375	0.375	-	-	0.500	0.500
38 x 28	38.000	28.000	24.00	0.375	0.375	-	-	0.500	0.500
38 x 26	38.000	26.000	24.00	0.375	0.375	-	-	0.500	0.500
40 x 38	40.000	38.000	24.00	0.375	0.375	-	-	0.500	0.500
40 x 36	40.000	36.000	24.00	0.375	0.375	-	-	0.500	0.500
40 x 34	40.000	34.000	24.00	0.375	0.375	-	-	0.500	0.500
40 x 32	40.000	32.000	24.00	0.375	0.375	-	-	0.500	0.500
40 x 30	40.000	30.000	24.00	0.375	0.375	-	-	0.500	0.500
42 x 40	42.000	40.000	24.00	0.375	0.375	-	-	0.500	0.500
42 x 38	42.000	38.000	24.00	0.375	0.375	-	-	0.500	0.500
42 x 36	42.000	36.000	24.00	0.375	0.375	-	-	0.500	0.500
42 x 34	42.000	34.000	24.00	0.375	0.375	-	-	0.500	0.500
42 x 32	42.000	32.000	24.00	0.375	0.375	-	-	0.500	0.500
42 x 30	42.000	30.000	24.00	0.375	0.375	-	-	0.500	0.500

Nominal Pipe Size	Outside Diameter		End to End	STD		XS	
	OD1	OD2	H	T1	T2	T1	T2
44 x 42	44.000	42.000	24.00	0.375	0.375	0.500	0.500
44 x 40	44.000	40.000	24.00	0.375	0.375	0.500	0.500
44 x 38	44.000	38.000	24.00	0.375	0.375	0.500	0.500
44 x 36	44.000	36.000	24.00	0.375	0.375	0.500	0.500
46 x 44	46.000	44.000	28.00	0.375	0.375	0.500	0.500
46 x 42	46.000	42.000	28.00	0.375	0.375	0.500	0.500
46 x 40	46.000	40.000	28.00	0.375	0.375	0.500	0.500
46 x 38	46.000	38.000	28.00	0.375	0.375	0.500	0.500
48 x 46	48.000	46.000	28.00	0.375	0.375	0.500	0.500
48 x 44	48.000	44.000	28.00	0.375	0.375	0.500	0.500
48 x 42	48.000	42.000	28.00	0.375	0.375	0.500	0.500
48 x 40	48.000	40.000	28.00	0.375	0.375	0.500	0.500
50 x 48	50.000	48.000	30.00	-	-	-	-
50 x 46	50.000	46.000	30.00	-	-	-	-
50 x 44	50.000	44.000	30.00	-	-	-	-
50 x 42	50.000	42.000	30.00	-	-	-	-
52 x 50	52.000	50.000	30.00	-	-	-	-
52 x 48	52.000	48.000	30.00	-	-	-	-
52 x 46	52.000	46.000	30.00	-	-	-	-
52 x 44	52.000	44.000	30.00	-	-	-	-
54 x 52	54.000	52.000	30.00	-	-	-	-
54 x 50	54.000	50.000	30.00	-	-	-	-
54 x 48	54.000	48.000	30.00	-	-	-	-
54 x 46	54.000	46.000	30.00	-	-	-	-
56 x 54	56.000	54.000	30.00	-	-	-	-
56 x 52	56.000	52.000	30.00	-	-	-	-
56 x 50	56.000	50.000	30.00	-	-	-	-
56 x 48	56.000	48.000	30.00	-	-	-	-
58 x 56	58.000	56.000	30.00	-	-	-	-
58 x 54	58.000	54.000	30.00	-	-	-	-
58 x 52	58.000	52.000	30.00	-	-	-	-
58 x 50	58.000	50.000	30.00	-	-	-	-
60 x 58	60.000	58.000	30.00	-	-	-	-
60 x 56	60.000	56.000	30.00	-	-	-	-
61 x 54	60.000	54.000	30.00	-	-	-	-
62 x 52	60.000	52.000	30.00	-	-	-	-

WROUGHT STEEL BUTT-WELDING FITTINGS

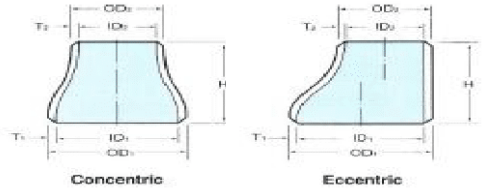
DOBEND

Reducer

Sch 5S, Sch 10S, STD, Sch 20, Sch 30, Sch 60, Sch 100, Sch 120, Sch 140

Material:

ASTM A234 WPB; A403 WP304/304L; A403 WP316/316L; A403 WP310S



ASME B16.9

Unit : Inch

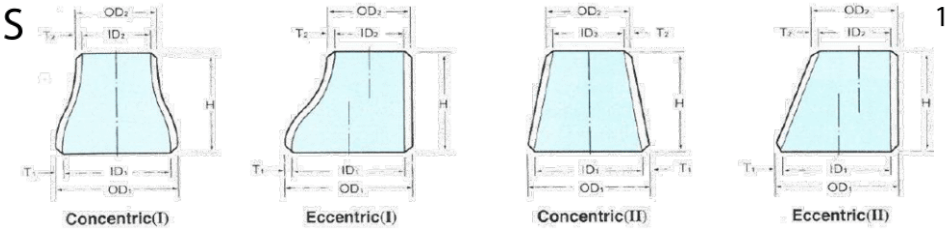
Nominal Pipe Size	Outside Diameter		End to End	Sch 20		Sch 30		Sch 60		Sch 100		Sch 120		Sch 140		Nominal Pipe Size
	OD1	OD2	H	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
5 X 4	5.563	4.500	5.00	-	-	-	-	-	-	-	-	0.500	0.438	-	-	5 X 4
6 X 5	6.625	5.563	5.50	-	-	-	-	-	-	-	-	0.562	0.500	-	-	6 X 5
6 X 4	6.625	4.500	5.50	-	-	-	-	-	-	-	-	0.562	0.438	-	-	6 X 4
8 X 6	8.625	6.625	6.00	-	-	-	-	-	-	-	-	0.719	0.562	-	-	8 X 6
8 X 5	8.625	5.563	6.00	-	-	-	-	-	-	-	-	0.719	0.500	-	-	8 X 5
8 X 4	8.625	4.500	6.00	-	-	-	-	-	-	-	-	0.719	0.438	-	-	8 X 4
10 X 8	10.750	8.625	7.00	0.250	0.250	0.307	0.277	0.500	0.406	0.719	0.594	0.844	0.719	1.000	0.812	10 X 8
10 X 6	10.750	6.625	7.00	-	-	-	-	-	-	-	-	0.844	0.562	-	-	10 X 6
10 X 5	10.750	5.563	7.00	-	-	-	-	-	-	-	-	0.844	0.500	-	-	10 X 5
10 X 4	10.750	4.500	7.00	-	-	-	-	-	-	-	-	0.844	0.438	-	-	10 X 4
12 X 10	12.750	10.750	8.00	0.250	0.250	0.330	0.307	0.562	0.500	0.844	0.719	1.000	0.844	1.125	1.000	12 X 10
12 X 8	12.750	8.625	8.00	0.250	0.250	0.330	0.277	0.562	0.406	0.844	0.594	1.000	0.719	1.125	0.812	12 X 8
12 X 6	12.750	6.625	8.00	-	-	-	-	-	-	-	-	1.000	0.526	-	-	12 X 6
12 X 5	12.750	5.563	8.00	-	-	-	-	-	-	-	-	1.000	0.500	-	-	12 X 5
14 X 12	14.000	12.750	13.00	0.312	0.250	0.375	0.330	0.594	0.562	0.938	0.844	1.094	1.000	1.250	1.125	14 X 12
14 X 10	14.000	10.750	13.00	0.312	0.250	0.375	0.307	0.594	0.500	0.938	0.719	0.094	0.844	1.250	1.000	14 X 10
14 X 8	14.000	8.625	13.00	0.312	0.250	0.375	0.277	0.594	0.406	0.938	0.594	1.094	0.719	1.250	0.812	14 X 8
14 X 6	14.000	6.625	13.00	0.312	-	-	-	-	-	-	-	1.094	0.562	-	-	14 X 6
16 X 14	16.000	14.000	14.00	0.312	0.312	0.375	0.375	0.658	0.594	1.031	0.938	1.219	1.094	1.438	1.250	16 X 14
16 X 12	16.000	12.750	14.00	0.312	0.250	0.375	0.330	0.656	0.562	1.031	0.844	1.219	1.000	1.438	1.125	16 X 12
16 X 10	16.000	10.750	14.00	0.312	0.250	0.375	0.307	0.656	0.500	1.031	0.719	1.219	0.844	1.438	1.000	16 X 10
16 X 8	16.000	8.625	14.00	0.312	0.250	0.375	0.277	0.656	0.406	1.031	0.594	1.219	0.719	1.438	0.812	16 X 8
18 X 16	18.000	16.000	15.00	0.312	0.312	0.438	0.375	0.750	0.656	1.156	1.031	1.375	1.219	1.562	1.438	18 X 16
18 X 14	18.000	14.000	15.00	0.312	0.312	0.438	0.375	0.750	0.594	1.156	0.938	1.375	1.094	1.562	1.250	18 X 14
18 X 12	18.000	12.750	15.00	0.312	0.250	0.438	0.330	0.750	0.562	1.156	0.844	1.375	1.000	1.562	1.125	18 X 12
18 X 10	18.000	10.750	15.00	0.312	0.250	0.438	0.307	0.750	0.500	1.156	0.719	1.375	0.844	1.562	1.000	18 X 10
20 X 18	20.000	18.000	20.00	0.375	0.375	0.500	0.438	0.812	0.750	1.281	1.156	1.500	1.375	1.750	1.562	20 X 18
20 X 16	20.000	16.000	20.00	0.375	0.375	0.500	0.375	0.812	0.656	1.281	1.031	1.500	1.219	1.750	1.438	20 X 16
20 X 14	20.000	14.000	20.00	0.375	0.375	0.500	0.375	0.812	0.594	1.281	0.938	1.500	1.094	1.750	1.250	20 X 14
20 X 12	20.000	12.000	20.00	0.375	0.250	0.500	0.330	0.812	0.562	1.281	0.844	1.500	1.000	1.750	1.125	20 X 12

WROUGHT STEEL BUTT-WELDING FITTINGS

DOBEND

Reducer

Sch 5S, Sch 10S, Sch 20, Sch 30, Sch 60, Sch 100, Sch 120, Sch 140



ASME B16.9

Nominal Pipe Size	Outside Diameter		End to End	Sch 20		Sch 30		Sch 60		Sch 100		Sch 120		Sch 140		Nominal Pipe Size
	OD1	OD2	H	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
22 x 20	22.000	20.000	20.00	0.375	0.375	0.500	0.500	0.875	0.812	1.375	1.218	1.625	1.500	1.875	1.750	22 x 20
22 x 18	22.000	18.000	20.00	0.375	0.312	0.500	0.438	0.875	0.750	1.375	1.156	1.625	1.375	1.875	1.562	22 x 18
22 x 16	22.000	16.000	20.00	0.375	0.312	0.500	0.375	0.858	0.656	1.3.75	1.031	1.625	1.219	1.875	1.438	22 x 16
22 x 14	22.000	14.000	20.00	0.375	0.312	0.500	0.375	0.875	0.594	1.375	0.938	1.625	1.094	1.875	1.250	22 x 14
24 x 22	24.000	22.000	20.00	0.375	0.375	0.562	0.500	0.969	0.875	1.531	1.375	1.812	1.625	2.062	1.875	24 x 22
24 x 20	24.000	20.000	20.00	0.375	0.375	0.562	0.500	0.969	0.812	1.531	1.281	1.812	1.500	2.062	1.750	24 x 20
24 x 18	24.000	18.000	20.00	0.375	0.312	0.562	0.438	0.969	0.750	1.531	1.156	1.812	1.375	2.062	1.562	24 x 18
24 x 16	24.000	16.000	20.00	0.375	0.312	0.562	0.375	0.969	0.656	1.531	1.031	1.812	1.219	2.062	1.438	24 x 16
26 x 24	26.000	24.000	24.00	0.500	0.375	-	-	-	-	-	-	-	-	-	-	26 x 24
26 x 22	26.000	22.000	24.00	0.500	0.375	-	-	-	-	-	-	-	-	-	-	26 x 22
26 x 20	26.000	20.000	24.00	0.500	0.375	-	-	-	-	-	-	-	-	-	-	26 x 20
26 x 18	26.000	18.000	24.00	0.500	0.312	-	-	-	-	-	-	-	-	-	-	26 x 18
28 x 26	28.000	26.000	24.00	0.500	0.500	-	-	-	-	-	-	-	-	-	-	28 x 26
28 x 24	28.000	24.000	24.00	0.500	0.375	0.625	0.562	-	-	-	-	-	-	-	-	28 x 24
28 x 20	285.000	20.000	24.00	0.500	0.375	0.625	0.500	-	-	-	-	-	-	-	-	28 x 20
28 x 18	28.000	18.000	24.00	0.500	0.312	0.625	0.438	-	-	-	-	-	-	-	-	28 x 18
30 x 28	30.000	28.000	24.00	0.500	0.500	0.625	0.625	-	-	-	-	-	-	-	-	30 x 28
30 x 26	30.000	26.000	24.00	0.500	0.500	-	-	-	-	-	-	-	-	-	-	30 x 26
30 x 24	30.000	24.000	24.00	0.500	0.375	0.625	0.562	-	-	-	-	-	-	-	-	30 x 24
30 x 20	30.000	20.000	24.00	0.500	0.375	0.625	0.500	-	-	-	-	-	-	-	-	30 x 20
32 x 30	32.000	30.000	24.00	0.500	0.500	0.625	0.625	-	-	-	-	-	-	-	-	32 x 30
32 x 28	32.000	28.000	24.00	0.500	0.500	0.625	0.625	-	-	-	-	-	-	-	-	32 x 28
32 x 26	32.000	26.000	24.00	0.500	0.500	-	-	-	-	-	-	-	-	-	-	32 x 26
32 x 24	32.000	24.000	24.00	0.500	0.375	0.625	0.562	-	-	-	-	-	-	-	-	32 x 24
34 x 32	34.000	32.000	24.00	0.500	0.500	0.625	0.625	-	-	-	-	-	-	-	-	34 x 32
34 x 30	34.000	30.000	24.00	0.500	0.500	0.625	0.625	-	-	-	-	-	-	-	-	34 x 30
34 x 28	34.000	28.000	24.00	0.500	0.500	0.625	0.625	-	-	-	-	-	-	-	-	34 x 28
34 x 26	34.000	26.000	24.00	0.500	0.500	-	-	-	-	-	-	-	-	-	-	34 x 26
36 x 34	36.000	34.000	24.00	0.500	0.500	0.625	0.625	-	-	-	-	-	-	-	-	36 x 34
36 x 32	36.000	32.000	24.00	0.500	0.500	0.625	0.625	-	-	-	-	-	-	-	-	36 x 32
36 x 30	36.000	30.000	24.00	0.500	0.500	0.625	0.625	-	-	-	-	-	-	-	-	36 x 30
36 x 28	36.000	28.000	24.00	0.500	0.500	0.625	0.625	-	-	-	-	-	-	-	-	36 x 28

Material: ASTM A234 WPB; A403 WP304/304L; A403 WP316/316L; A403 WP310S

WROUGHT STEEL BUTT-WELDING FITTINGS

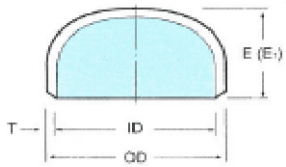
DOBEND

Cap

Sch 5S, Sch 10S, STD, Sch 40, XS Sch 80, Sch 160, XXS

Material:

ASTM A234 WPB; A403 WP304/304L; A403 WP316/316L; A403 WP310S



ASME B16.9

Cap

Unit : Inch

Nominal Pipe Size	Outside Diameter OD	Length E	Limting Wall Thickness for Length	Length E1	STD T	STD ID	Sch 40 T	Sch 40 ID	XS T	XS ID	Sch 80 T	Sch 80 ID	Sch 160 T	Sch 160 ID	XXS T	XXS ID	Nominal Pipe Size
1/2	0.840	1.00	0.18	1.00	0.109	0.622	0.109	0.622	0.147	0.546	0.147	0.546	0.188	0.464	0.294	0.252	1/2
3/4	1.050	1.00	0.15	1.00	0.113	0.824	0.113	0.824	0.154	0.742	0.154	0.742	0.219	0.612	0.308	0.434	3/4
1	1.315	1.50	0.18	1.50	0.133	1.049	0.133	1.049	0.179	0.957	0.179	0.957	0.250	0.815	0.358	0.599	1
1.1/4	1.660	1.50	0.19	1.50	0.140	1.380	0.140	1.380	0.191	1.278	0.191	1.278	0.250	1.160	0.382	0.896	1.1/4
1.1/2	1.900	1.50	0.20	1.50	0.145	1.610	0.145	1.610	0.200	1.500	0.200	1.500	0.281	1.338	0.400	1.100	1.1/2
2	2.375	1.50	0.22	1.75	0.154	2.067	0.154	2.067	0.219	1.939	0.218	1.939	0.344	1.687	0.436	1.503	2
2.1/2	2.875	1.50	0.28	2.00	0.203	2.469	0.203	2.469	0.276	2.323	0.276	2.323	0.375	2.125	0.552	1.771	2.1/2
3	3.500	2.00	0.30	2.50	0.216	3.068	0.216	3.068	0.300	2.900	0.300	2.900	0.438	2.624	0.600	2.300	3
3.1/2	4.000	2.50	0.32	3.00	0.226	3.548	0.226	3.548	0.318	3.364	0.318	3.364	-	-	-	-	3.1/2
4	4.500	2.50	0.34	3.00	0.237	4.026	0.237	4.026	0.337	3.826	0.337	3.826	0.531	3.438	0.674	3.152	4
5	5.563	3.00	0.38	3.50	0.258	5.047	0.258	5.047	0.375	4.813	0.375	4.813	0.625	4.313	0.750	4.063	5
6	6.625	3.50	0.49	4.00	0.280	6.065	0.280	6.065	0.432	5.761	0.432	5.761	0.719	5.187	0.864	4.897	6
8	8.625	4.00	0.50	5.00	0.322	7.981	0.322	7.981	0.500	7.625	0.500	7.625	0.906	6.813	0.875	6.875	8
10	10.750	5.00	0.50	6.00	0.365	10.020	0.365	10.020	0.500	9.750	0.594	9.562	1.125	8.500	1.000	8.750	10
12	12.750	6.00	0.50	7.00	0.375	12.000	0.406	11.938	0.500	11.750	0.688	11.374	1.312	10.126	1.000	10.750	12
14	14.000	6.50	0.50	7.50	0.375	13.250	0.438	13.124	0.500	13.000	0.750	12.500	1.406	11.188	-	-	14
16	16.000	7.00	0.50	8.00	0.375	15.250	0.500	15.000	0.500	15.000	0.844	14.312	1.594	12.812	-	-	16
18	18.000	8.00	0.50	9.00	0.375	17.250	0.562	16.864	0.500	174.000	0.938	16.124	1.781	14.438	-	-	18
20	20.000	9.00	0.50	10.00	0.375	19.250	0.594	18.812	0.500	19.000	1.031	17.938	1.958	16.062	-	-	20
22	22.000	10.00	0.50	10.00	0.375	21.250	0.594	20.812	0.500	21.000	1.125	19.750	2.125	17.750	-	-	22
24	24.000	10.50	0.50	12.00	0.375	23.250	0.688	22.624	0.500	23.000	1.219	21.562	2.344	19.312	-		24
26	26.000	10.50	-	-	0.375	25.250	0.688	24.624	0.500	25.000	-	-	-	-	-	-	26
28	28.000	10.50	-	-	0.375	27.250	0.688	26.624	0.500	27.000	-	-	-	-	-	-	28
30	30.000	10.50	-	-	0.375	29.250	0.688	28.624	0.500	29.000	-	-	-	-	-	-	30
32	32.000	10.50	-	-	0.375	31.250	0.688	30.624	0.500	31.000	-	-	-	-	-	-	32
34	34.000	10.50	-	-	0.375	33.250	0.688	32.624	0.500	33.000	-	-	-	-	-	-	34
36	36.000	10.50	-	-	0.375	35.250	0.750	34.500	0.500	35.000	-	-	-	-	-	-	36
38	38.000	12.00	-	-	0.375	37.250	-	-	0.500	37.000	-	-	-	-	-	-	38
40	40.000	12.00	-	-	0.375	39.250	-	-	0.500	39.000	-	-	-	-	-	-	40
42	42.000	12.00	-	-	0.375	41.250	-	-	0.500	41.000	-	-	-	-	-	-	42
44	44.000	13.50	-	-	0.375	43.250	-	-	0.500	43.000	-	-	-	-	-		44
46	46.000	13.50	-	-	0.375	45.250	-	-	0.500	45.000	-	-	-	-	-	-	46
48	48.000	13.50	-	-	0.375	47.250	-	-	0.500	47.000	-	-	-	-	-	-	48
50	50.000	14.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
52	52.000	14.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52
54	54.000	15.15	-	-	-	-	-	-	-	-	-	-	-	-	-		54
56	56.000	15.65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56
58	58.000	16.23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	58
60	60.000	16.53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60

WROUGHT STEEL BUTT-WELDING FITTINGS

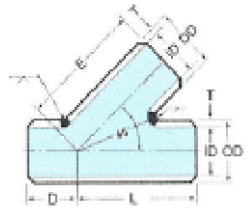
DOBEND

Lateral Tee

Sch 5S, Sch 10S, STD, Sch 40, XS Sch 80, Sch 160, XXS

Material:

ASTM A234 WPB; A403 WP304/304L; A403 WP316/316L; A403 WP310S



ASME B16.9

Unit : Inch

Nominal Pipe Size	Outside Diameter OD	STD					XS				
		E & L	D	T	I.D	WT(kg)	E & L	D	T	I.D	WT(kg)
1	1.315	5.75	1.75	0.133	1.049	0.77	6.50	2.00	0.179	0.957	1.13
1.1/4	1.660	6.25	1.75	0.140	1.380	1.09	7.25	2.25	0.191	1.278	1.72
1.1/2	1.900	7.00	2.00	0.145	1.610	1.45	8.50	2.50	0.200	1.500	2.45
2	2.375	8.00	2.50	0.154	2.067	2.27	9.00	2.50	0.218	1.939	3.4
2.1/2	2.875	9.50	2.50	0.203	2.469	4.17	10.50	2.50	0.276	2.323	6.15
3	3.500	10.00	3.00	0.216	3.068	5.72	11.00	3.00	0.300	2.900	8.53
3.1/2	4.000	11.50	3.00	0.226	3.458	7.80	12.50	3.00	0.318	3.364	11.61
4	4.500	12.00	3.00	0.237	4.026	9.43	13.50	3.00	0.337	3.826	14.88
5	5.562	13.50	3.50	0.258	5.047	14.24	15.00	3.50	0.375	4.813	22.59
6	6.625	14.50	3.50	0.280	6.065	19.23	17.50	4.00	0.432	5.761	35.83
8	8.625	17.50	4.50	0.322	7.981	34.47	20.50	5.00	0.500	7.625	63.5
10	10.750	20.50	5.00	0.365	10.020	56.25	24.00	5.50	0.500	9.750	96.63
12	12.750	24.50	5.50	0.375	12.000	81.65	27.50	6.00	0.500	11.750	123.36
14	14.000	27.00	6.00	0.375	13.250	98.88	31.00	6.50	0.500	13.000	154.22
16	16.000	30.00	6.50	0.375	15.250	124.74	34.50	7.50	0.500	15.000	196.41
18	18.000	32.00	7.00	0.375	17.250	147.87	37.50	8.00	0.500	17.000	238.59
20	20.000	35.00	8.00	0.375	19.250	179.63	40.50	8.50	0.500	19.000	284.86
24	24.000	40.50	9.00	0.375	23.250	246.76	47.50	10.00	0.500	23.000	400.08